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PETITION AGAINST TO ISSUE OF PATENT

December 27, 2003

Commissioner for Patents

1. Patent concerned in the petition

Japanese Patent	No. 3461750
Claims concerned in the petition	Claims 1, 4-9, 13, 16, and 17

2. Petitioner

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3. Reasons of the petition

(1) Summary of reasons of the petition

Japanese Patent Law § 29 (2) (claims 1-18) (Japanese Patent Law § 113 (1) (2))

Japanese Patent Law § 36 (4) and (6)(2)

(claims 1, 10-13, 17, and 18) (Japanese Patent Law § 113 (1) (4))

Claim	The present invention	Evidences
1	(E) a communication apparatus comprising: (A1) a memory that stores a plurality of sender information; (B1) a setting means that obtains sender information from the memory and sets the sender information in an e-mail; (C1) an e-mail transmitter that sets the obtained sender information in the e-mail and transmits the e-mail when transmitting scanned image data by utilizing the e-mail; (D) a register that outputs a HTML document for inputting data based on a HTTP communication procedure and registers the sender information in the memory based on information input into the HTML document. (Effect of the invention) A user can register sender information by utilizing HTTP and can make the registration with an easy operation.	Reference No.1 Japanese Laid-Open Patent Publication No. Hei 10-307769. Pages 2, 5, and 6. A1, B1, C1, and E. A1. a plurality of sender addresses are registered in a sender address table 7 (page 6, right column). B1. a sender address, which is selectively designated from the sender address table, is described in an e-mail (page 6, right column). C1. the e-mail, in which the sender address is described, is transmitted (page 5, left column). E. a facsimile type e-mail apparatus (page 2, right column). Reference No.2 Japanese Laid-Open Patent Publication No. Hei 10-191010. Page 5. D. D. a telephone number lists are registered through a WWW browser (page 5, right column).
4	The communication apparatus according to claims 1-3, wherein said sender information	Reference No.1. Fig.3 A sender name is set in an account of a sender address (Fig.3).

	is a sender name set in the e-mail.	
5	H. The communication apparatus according to claims 1-3, wherein said sender information is a mail address set in the e-mail.	Reference No.1, pages 5-6. A sender address is described in an e-mail (page 5, left column – page 6, right column).
6	I. The communication apparatus according to claims 1-3, wherein said sender information is a mail address set in a mail from command.	Reference No. 1. Page 6. A sender address is a destination to which an error mail is transmitted (page 6, right column).
7	E. a communication apparatus comprising: A2. a memory that stores a plurality of mail addresses set in a MAIL FROM COMMAND; B2. a setting means that obtains a mail address from the memory and sets the mail address in the MAIL FROM COMMAND of an e-mail; C2. an E-mail transmitter that sets the obtained mail address in the MAIL FROM COMMAND and transmits the e-mail when transmitting scanned image data using the e-mail.	Reference No. 1. Pages 2, 5, and 6. A2, B2, C2, and E A2. a plurality of sender addresses are registered in the sender address table. The plurality of sender addresses are set in an e-mail as addresses, to which an error mail returns. (page 6, right column). B2. a sender address, which is selectively designated form the sender address table, is described in an e-mail (page 6, left column). C2. the e-mail, in which the sender address is described, is transmitted (page 4, left column). E. a facsimile type e-mail apparatus (page 2, right column).
8	The communication apparatus according to claim 7, wherein said memory stores a plurality of mail addresses, and a mail address can be selectively set as sender information when transmitting the e-mail.	Reference No. 1. Pages 5, 6. A plurality of sender addresses are registered in the sender address table (page 6, right column). A sender address, which is selectively designated form the

		sender address table, is described in the e-mail (page 6, right column).
9	N. The communication apparatus according to claim 7, wherein said memory stores a plurality of sender names, and a sender name can be selectively set as sender information when transmitting the e-mail.	Reference No.1. Pages 5,6. A plurality of sender addresses, which include sender names in accounts, are registered in a sender address table (page 6, right column). A sender address, which is selectively designated form the sender address table, is described in an e-mail (page 6, right column).
13	(E) A register method for registering sender information in a communication apparatus, the communication apparatus having (A1) a memory that stores a plurality of sender information, (B1) a setting means that obtains sender information from the memory and sets the sender information in an e-mail, and (C1) an e-mail transmitter that set the obtained sender information in the e-mail and transmits the e-mail when transmitting scanned image data by utilizing the e-mail, the register method comprising: (D) outputting a HTML document for inputting data when a request for registering the sender information is received, based on a HTTP communication procedure: and registering the sender information in the memory, based on information input into the HTML document.	Reference No.1. Pages 5,6. A1, B1, C1, and E Reference No.2. Page 5. D
16	A communication method	Reference No. 1. pages 5,6.

	comprising: (A3) a step for obtaining a mail address from the memory a memory that stores a plurality of mail addresses set in a MAIL FROM COMMAND; (B3) a step for setting the mail address in the MAIL FROM COMMAND of an e-mail; (C2) a step for setting the obtained mail address in the MAIL FROM COMMAND and transmitting the e-mail when transmitting scanned image data using the e-mail.	A3, B3, and C2.
17	A communication method comprising: (A4) a step for obtaining a sender name from a memory that stores a plurality of sender names when transmitting an e-mail; (B4) a step for setting the obtained sender name as a sender name of the e-mail; (C4) a step for setting the obtained sender name as the sender name of the sender information and transmitting the e-mail when transmitting the scanned image data using the e-mail.	Reference No.1. Pages 5,6. A4, B4, and C4. A4. a plurality of sender addresses, which include sender names in accounts, are registered in a sender address table, and are selectively designated therefrom (page 6, right column). B4. a designated sender address is described in an e-mail (page 6, right column). C4. the e-mail, in which the sender address is described in a header, is transmitted (page 5, left column).

a summary of the reasons

(claim 1) The reference No.1 discloses the elements A1, B1, C1, and E of claim 1, but does not disclose the element D. However, the reference No.2 teaches that information is registered in a table of a facsimile apparatus by using a WEB technology, such as described in the element D. Thus, Petitioner thinks that claim 1 was easily devised, based on the references No.1 and No.2.

(claim 4) Fig.3 of the reference No.1 discloses a sender address including a sender name. Thus, Petitioner thinks that claim 4 was easily devised, based on the references No.1 and No.2.

(claim 5) The reference No.1 discloses all elements of claim 5. Thus, Petitioner thinks that claim 4 was easily devised, based on the references No.1 and No.2.

(claim 6) The sender address described in the reference No.1 is a address to which an error mail is returned. Thus, Petitioner thinks that claim 6 was easily devised, based on the references No.1 and No.2.

(claim 7) The reference No. 1 substantially discloses the elements A2, B2, C2, and E of claim 7. Thus, Petitioner thinks that claim 7 was easily devised, based on the references No.1.

(claim 8) The reference No.1 discloses all elements of claim 8. Thus, Petitioner thinks that claim 8 was easily devised, based on the references No.1.

(claim 9) The reference No.1 discloses all elements of claim 9. Thus, Petitioner thinks that claim 9 was easily devised, based on the references No.1.

(claim 13) The reference No.1 discloses the elements A1, B1, C1, and E of claim 13, but does not disclose the element D. However, the reference No.2 teaches that an e-mail address is registered in a table of a facsimile apparatus by using a WEB technology, such as described in the element D. Thus, Petitioner thinks that claim 13 was easily devised, based on the references No.1 and No.2.

(claim 16) The reference No.1 substantially discloses the elements A3, B3, and C2 of claim 16. Thus, Petitioner thinks that claim 16 was easily devised, based on the references No.1.

(claim 17) The reference No.1 substantially discloses the elements A4, B4, and C4 of claim 17. Thus, Petitioner thinks that claim 17 was easily devised, based on the references No.1.

(2) the prosecution history

Filed	: March 4, 1999
Mailing date of Official Action	: July 17, 2001
Filing date of Remark	: September 3, 2001
Filing date of amendment	: September 3, 2001
Date of allowance	: July 8, 2003
Date of Patent	: August 15, 2003
Date of Patent Publication	: October 27, 2003

(3) the grounds of the petition

Inventions described in each claim of the present patent were easily devised by a person skilled in the art, based on the references No.1-No.4. Thus, Japanese Patent Law § 29 (2) is applied to these claims. Therefore, the application of the present patent should be canceled, based on Japanese Patent Law § 113 and § 114 (2).

(4) detailed reasons

① the present inventions claimed in the patent

Claim 1, 4-9, 13, 16, and 17 of the inventions of the present patent are the following, as described in "What Is Claimed Is" of the specification which are recited in the Japanese patent publication.

" [Claim 1]

(E) A communication apparatus comprising:

(A1) a memory that stores a plurality of sender information;

(B1) a setting means that obtains sender information from the memory and sets the sender information in an e-mail;

(C1) an e-mail transmitter that set the obtained sender information in the e-mail and transmits the e-mail when transmitting scanned image data by utilizing the e-mail;

(D) a register that outputs a HTML document for inputting data based on a HTTP communication procedure and registers the sender information in the memory based on information input into the HTML document.

… … …

[Claim 4]

The communication apparatus according to claims 1-3, wherein said sender information is a sender name set in the e-mail.

[Claim 5]

The communication apparatus according to claims 1-3, wherein said sender information is a mail address set in the e-mail.

[Claim 6]

The communication apparatus according to claims 1-3, wherein said sender information is a mail address set in a mail from command.

[Claim 7]

(E) A communication apparatus comprising:

(A2) a memory that stores a plurality of mail addresses set in a MAIL FROM COMMAND;

(B2) a setting means that obtains a mail address from the memory and sets the mail address in the MAIL FROM COMMAND of an e-mail;

(C2) an E-mail transmitter that sets the obtained mail address in the MAIL FROM COMMAND and transmits the e-mail when transmitting scanned image data using the e-mail.

[Claim 8]

The communication apparatus according to claim 7, wherein said memory stores a plurality of mail addresses, and a mail address can be selectively set as sender information when transmitting the e-mail.

[Claim 9]

The communication apparatus according to claim 7, wherein said memory stores a plurality of sender names, and a sender name can be selectively set as sender information when transmitting the e-mail.

... ...

[Claim 13]

A register method for registering sender information in a communication apparatus, the communication apparatus having

(A1) a memory that stores a plurality of sender information,

(B1) a setting means that obtains sender information from the memory and sets the sender information in an e-mail, and

(C1) an e-mail transmitter that set the obtained sender information in the e-mail and transmits the e-mail when transmitting scanned image data by utilizing the e-mail,

the register method comprising:

(D) outputting a HTML document for inputting data when a request for registering the sender information is received, based on a HTTP communication procedure, and registering the sender information in the memory, based on information input into the HTML document.

... ...

[Claim 16]

A communication method comprising:

(A3) a step for obtaining a mail address from the memory a memory that stores a plurality of mail addresses set in a MAIL FROM COMMAND;

(B3) a step for setting the mail address in the MAIL FROM COMMAND of an e-mail;

(C2) a step for setting the obtained mail address in the MAIL FROM COMMAND and transmitting the e-mail when transmitting scanned image data using the e-mail.

[Claim 17]

A communication method comprising:

(A4) a step for obtaining a sender name from a memory that stores a plurality of sender names when transmitting an e-mail;

(B4) a step for setting the obtained sender name as a sender name of the e-mail;

(C4) a step for setting the obtained sender name as the sender name of the sender information and transmitting the e-mail when transmitting the scanned image data using the e-mail."

The patent owner claimed that " a user can register sender information using a HTTP, and can easily make the registration, by the structure that a HTML document for inputting data is output, based on a HTTP communication procedure, and that the sender information is stored in the memory, based on information input in the HTML document", as the effect of claims 1-6, 13, and 15, in page 4, lines 4-8 of the remark filed on September 3, 2001 during the prosecution of the present patent.

The patent owner also contended that " a user can designate a destination to which an error mail returns by the structure that a mail address is selectively set in a MAIL FROM COMMAND", as the effect of claims 7-10, and 16, in page 4, lines 9-12 of the above remark.

Further, the patent owner asserted that "even though a user, not having an mail address, transmits an e-mail by using the present apparatus, another user at the receiving side can easily know who is a sender of the e-mail without setting an mail address by the structure that only user name can selectively be set", as the effect of claims 17, in page 4, lines 13-18 of the above remark.

② Explanation of the evidences

Reference No.1 (Japanese Laid-Open Patent Publication Hei 10-307769)

Page 2, right column, lines 22-24 of the reference No.1 discloses that

" This present invention relates to a facsimile type e-mail apparatus in which a user can transmit and receive image data in the same way as a facsimile communication."

Page 5, left column, lines 12-49 teaches that

" Fig.2 is a flow chart, being used when the facsimile type e-mail apparatus transmits image data.

First, at the step S1, a user sets a document on the scanner 6, inputs a destination (alphabets and digits) of an e-mail form the panel 7, and pushes the start button. Next, at the step S2, the document, which is set on the scanner 6, is input as image data, and at the step S3, the image data is compressed into a predetermined compression type, such as i.e. MR, MMR, JBIG, by compressor/decompressor 8 and is stored in external the memory 4. When documents consist of a plurality of pages, the plurality of pages are stored as one file in the external memory 4.

Next, the stored image data is converted into character codes by the format converter 5. This process is performed, based on the Internet e-mail standard, as called MIME (Multipurpose Internet Mail Extensions). At the step S4, data is read from the external memory 4 by each page, and a TIFF (Tag Image File Format) header is added to the data. At the step S5, BASE 64 encoding is performed. BASE 64 is a coding method in which binary data are transformed into seven bit text codes at a transmitting side, and in which they are transformed back to seven bit codes at a receiving side, similar to i.e. an uuencode, an ish. MIME adopts BASE 64. This is why the uuencode does not work well since unusual characters are often used in a header of an e-mail, but BASE 64 solves this problem by assigning different codes to such unusual characters.

Next, at the step S6, a destination, a sender, and a transforming way into character codes are described in the BASE 64 encoded data, a header is added to the BASE 64 encoded data, and an e-mail data is generated. The mail address of

the destination and the mail address of the sender are input by a keyboard, but can be input by a communication through a PW or a WS. The latter way is more easily to input them, and more efficiently to perform a transmission operation. This inputting way will be explained later. Next, at the step S7, the first page of the e-mail data starts to be transmitted as an e-mail form the LAM controller 9."

Page 5, right column, lines 29-48 teaches that

" Next, a procedure is explained, the procedure is for registering a mail address of a destination and a mail address of a sender into the facsimile type e-mail apparatus. It is possible to input the mail address of the destination and the mail address of the sender, directly by utilizing a keyboard, but it is also possible to input the mail address of the destination and the mail address of the sender, form PW or WS by utilizing an e-mail communication. The latter way is easier to input them, and makes an operation for transmitting the e-mail more efficient.

Fig.3 shows an sample of a format utilized for registration of the mail address of the destination and the mail address of the sender when the mail address of the destination and the mail address of the sender are registered by an e-mail. The e-mail is generally composed of a head 31 and a main context 32. @ mail list of the main context 32 is a control command for commanding to register a mail address which is described following the control command, a corresponding abbreviated ID number to the mail address, and an address to which an error mail returns. 'yamada@xx.yy.zz', 'toyoda@xx.yy.zz' show e-mail addresses of destiantion. 'taro', 'kiyo' show corresponding abbreviated ID numbers corresponding to the e-mail addresses, 'aaa@bb.cc.dd' shows an address for an error mail when an error occurs."

Page 6, left column, line 52- right column, line 1 teaches that

"Next, a registering method is explained by using a flow chart of Fig. 4. The registering method is performed by the facsimile type e-mail apparatus when

the above e-mail for a registering indication is received. First, at the step S 42, when the LAN controller 9 receives character codes of an e-mail, a main context of the e-mail is analyzed. Next, it is judged whether the main context of the e-mail includes descriptions indicating commands. When a command exists in the main context, a character line following the command is analyzed at the step S 44. Next, at the step S 45, a mail address of the manager is registered in the external memory 4. At the step S 46, a mail address of a destination, an abbreviated ID number corresponding to the mail address, and a mail address, to which an error mail returns, are registered in the external memory 4."

Page 6, right col., lines 24-59 teaches that

" A process for transmitting image data is explained by using a flow chart of Fig.5. The process is one for transmitting image data, based on e-mail address table which is registered by the above process. First, at the step S51, a user pushes a destination list button of the panel 7. At the step S52, the user inputs a ID number. At the step S53, a mail address of a sender corresponding to the ID number is read form the mail address table which is previously registered. The mail address of the sender is displayed on the display 7. Next, at the step S54, when the user pushes the start button, image data input form the scanner 6 is transformed, and is transmitted (the step S55-S57). The detail of this transforming process has already been explained by using Fig.2.

In addition, the address of the sender, set in the e-mail for transmitting image data, is an address to which an error mail returns. This address is registered in the mail address table in which mail addresses are previously registered. When the address, to which an error mail returns, is not registered in the mail address table, a mail address of the manager will be set in the e-mail. The mail address of the manager is set as a default value. Thus, the error mail will return to at least a terminal device.

Further, when a mail address of the sender is input when transmitting the e-mail, the mail address has priority to be described in the e-mail. A way for inputting the address of the sender when transmitting the e-mail, is that a user puts a sender button in the panel 7 and inputs a sender ID, a pre-registered table for addresses of senders is displayed, and then the user designates one address of a sender from the pre-registered table. This way is easy to input the address of the sender."

Page 7, right column, lines 13-16 teaches that

" When image data is transmitted using an e-mail, a user can receive an error mail, which is transmitted when an error occurs in the e-mail, not at the e-mail transmitting apparatus, but at the user's place."

② Reference No.2 (Japanese Laid-Open Patent Publication Hei 10-191010)

Page 2, right column, lines 13-16 of the reference No. 2 teaches that

" The present invention relates to a facsimile apparatus which can connect to a local area network (LAN) and which can perform a facsimile transmission form external device connected to the LAN."

Page 4, right column, lines 8-34 teaches that

" A HTTPD controller 13 performs a HTTPD (Hyper Text Transfer Protocol Deamon) function by using a data stream transfer function of a TCP/IP protocol. The data stream transfer function is performed by a LAN protocol controller 12. HTTP (Hyper Text Transfer Protocol) is a protocol for transferring a file (i.e. a home page) described in a HTML (Hyper Text Markup Language). A server, which transmits a HTML file to a world wide web (WWW) browser response to a request form the browser based on the HTTP protocol, is called HTTPD.

A home page manager 14 stores a home page file of the facsimile apparatus described in HTML, and outputs the home page file in a response to a request of the HTTPD controller 13. Thus, when a WWW browser requests the facsimile apparatus to transmit the home page, the HTTPD controller 13 obtains the home page file form the home page manager 14 and transmits it to the WWW browser.

A telephone list manager 15 stores telephone list information. The telephone list information consists of a pair of a sender name, which is registered by the user and which is often used, and facsimile number. The telephone list manager 15 transforms the telephone list information into the HTML format and outputs it, response to a request form the HTTPD controller 13. Thus, when the WWW browser requests the facsimile apparatus to transmit the telephone list, the HTTPD controller 13 obtains, form the telephone list manager 15, a telephone list file described in HTML, and transmits it to the WWW browser."

Page 5, right column, lines 37-41 teaches that

" In the embodiment of the present invention, the telephone list information is merely referred on the WWW browser, but can technically be registered, corrected, and deleted on the WWW browser."

③ Reference No.3 (Japanese Laid-Open Patent Publication Hei 10-28217)

Page 2, left column, lines 23-26 of the reference No.3 teaches that

" the present invention relates to a communication terminal apparatus having a function capable of receiving an e-mail, for example, a facsimile apparatus which is connected to a computer communication line, such as i.e. the Internet and which can receive the e-mail."

Page 4, right column, lines 10-17 teaches that

"In a user (sender) table T2, as shown in Fig.4, a user name of a communication terminal apparatus T, an Internet e-mail address, a type of a

provider, and a user ID and a password for logging in the Internet are registered. In addition, when a plurality of users commonly use one communication terminal apparatus in an office, it is possible to previously make the registration for each user and to select the registration for each user before a transmission."

Page 5, left column, line 34- right column, line 14 teaches that

"a user set a transmitting document on a document plate of the communication terminal apparatus T of the present invention (step S1). The user gives, to the communication terminal apparatus, an indication for selecting a provider and a line from a table T3, by operating a key of a panel 5 (step S2). Further, The user inputs a pass code to select a registered user name, and selects the registered user name from the table T2 (step S3). ... As described above, the selected provider or the selected line, the user name, and the destination are stored in the RAM 7."

④ Reference No.4 (Japanese Laid-Open Patent Publication Hei 10-341306)

Page 2, right column, lines 43-44 of the reference No.4 teaches that

" the present invention relates to a method for controlling a network facsimile apparatus which transmits and receives data on a local area network, transmits and receives facsimile data via a public telephone line based on a facsimile communication procedure. The network facsimile apparatus receives an e-mail via the local area network, stores image data included in the received e-mail, and, after that, transmits the image data to a facsimile apparatus, designated by the e-mail, via the public telephone line."

Page 5, left column, line 50- right column, line 12 teaches that

" and 'a user name' and a mail address of a transmitting user ('user1@***.co.jp') are set in a 'From' field of a header information of the e-mail. 'A telephone number of a transfer destination' indicating a telephone number of a

facsimile apparatus, to which data is transferred, is set in a 'subject' field. 'A MUA application name' indicating an application name of MUA (Mail User Agent), which the transmitting user used, are set in a 'X-mailer' field.

Transmitting image data is coded by a base 64 coding method, and then is set in a main context information."

③ Comparison the present patent with references

③-1. claim 1

The element E (a communication apparatus.):

As described at the page 2, right column, line 22-24 of the reference No.1 (the paragraph [0001]), the reference No.1 relates to a patent laid open publication regarding a facsimile type e-mail apparatus. The facsimile type e-mail apparatus includes "a communication apparatus". Thus, Petitioner thinks that the reference No.1 discloses the element E of claim 1.

The element A1 (a memory that stores a plurality of sender information):

The page 6, right column, lines 36-38 of the reference No.1 (the paragraph [0033]) teaches that

" The address of the sender, set in the e-mail for transmitting image data, is an address to which an error mail returns. This address is registered in the mail address table in which mail addresses are previously registered."

Based on the above description, "an address to which an error mail returns" is registered "in the mail address table," and is described in the e-mail, as "the address of the sender". Thus, "an address to which an error mail returns" means " the sender information."

The page 6, right column, lines 45-49 (the paragraph [0033]) teaches that

" A way for inputting the address of the sender when transmitting the e-mail, is that a user puts a sender button in the panel 7 and inputs a sender ID, a

pre-registered table for addresses of senders is displayed, and then the user designates one address of a sender from the pre-registered table."

It is clear that a plurality of "addresses of senders" are registered in the "pre-registered table for addresses of senders", since an "address of a sender" is selectively designated form "the pre-registered table."

Further, the page 6, left column, line 49- right column, line 1 (the paragraph [0030]) teaches that "a mail address, to which an error mail returns" is actually registered in "the external memory 4".

As above all factors are considered, "the external memory" corresponds to "a memory that stores a plurality of sender information." Thus, the reference No.1 discloses the element A1 of claim 1.

The element B1 (a setting means that obtains sender information from the memory and sets the sender information in an e-mail):

The page 6, right column, lines 45-49 (the paragraph [0033]) of the reference No.1 suggests that "one address of the sender (an address to which an error mail returns)" is selectively designated form "the pre-registered table for addresses of senders." The page 6, right column, lines 36-38 (the paragraph [0033]) teaches that the "address of the sender (the address to which an error mail returns), " designated as above, is read from "the mail address table (the external memory 4)" and is described in an e-mail. In other words, the "address of the sender (the address to which an error mail returns)" is obtained form "the mail address table (the external memory 4)" and is set in the e-mail. Petitioner thinks that this exactly means that "a setting means that obtains sender information from the memory and sets the sender information in an e-mail." Thus, Petitioner discloses the element B1 of claim 1.

The element C1 (an e-mail transmitter that sets the obtained sender information in the e-mail and transmits the e-mail when transmitting scanned image data by utilizing the e-mail):

As explained in the element B1 above, "the address of the sender (the address to which an error mail returns)" is read from "the mail address table (the external memory 4)" and is described in the e-mail. This "e-mail is an "e-mail for transmitting image data" scanned by "the scanner 6", as described at the page 5, right column, lines 32-36 (the paragraph [0027]). Specially, as described at the page 5, left column, lines 12-43 of the reference No.1 (the paragraph [0021]-[0023]), "the scanner 6" scans document, "image data" is input thereby, the image data is transformed into "character codes", "a destination, a sender, and a transforming way into character codes" are added to "data encoded by BASE64", to which a "TIFF" header is added, and then an "e-mail data" is generated. Such an "e-mail data" is "transmitted as an e-mail," as described at the page 5, left column, lines 48-49 (the paragraph [0023]). In other words, when the "image data", scanned by "the scanner 6", is transmitted as an "e-mail", the "address of the sender (the address to which an error mail returns)" is obtained from "the mail address memory (the external memory 4)" and is set in the "e-mail." The e-mail is transmitted. Petitioner thinks that this means "sets the obtained sender information in the e-mail and transmits the e-mail when transmitting scanned image data by utilizing the e-mail". Thus, Petitioner thinks that the reference No.1 discloses the element C1 of claim 1.

The element D (a register that outputs a HTML document for inputting data based on a HTTP communication procedure and registers the sender information in the memory based on information input into the HTML document):

Based on the descriptions at the page 5, right column, lines 30-48 and the page 6, left column, line 42- right column, line 1 (the paragraph [0030]), "the facsimile type e-mail apparatus" receives, form "another PW or WS", the e-mail in

which "the address, to which an error mail returns (the address of the sender)," is described, based on a format shown in Fig.3, and thereby, the registration of the address, to which an error mail returns (the address of the sender), into the mail address table (the external memory 4) is performed. However, the reference No.1 does not disclose the registration of "the address, to which an error mail returns (the address of the sender)" is performed by using a HTML document based on a HTTP procedure.

However, at the time when the present application was filed, a WEB technology, which registered data in "a communication apparatus," was well known. (In other words, a server in a communication apparatus transmits a HTML document, which was requested by a HTTP request message, to a WWW browser of a terminal apparatus which requested the HTML document. The WWW browser displays a context of the HTML document. When necessary information is input in an information input column which is displayed based on a form tag of the HTML document, the WWW browser transmits, to the server, a HTTP request message which sets the necessary information as a parameter. Then, the server obtains the necessary information. This technology was well known.)

For example, as described the page 2, right column, lines 21-24 (the [0001]), the reference No.2 relates to a facsimile apparatus, like the reference No.1. Thus, the reference No.2 has a motivation to combine the reference No.1. At the page 4, right column, lines 8-34 (the paragraph [0023]-[0025]), the reference No.2 discloses that "a HTTP controller 13" transmits to "a WWW browser" "a telephone number lists described in a HTML" which is stored in "a home page file described in the HTML", for example, a telephone number list manager 15, in a response to "a request of the WWW browser".

Further, at the page 5, right column, lines 37-41 (the paragraph [0042]) of the reference No.2, the reference No.2 discloses that the telephone list information "can technically be registered, corrected, and deleted on the WWW browser." Petitioner can easily understand the meaning of the paragraph, based on

knowledge of a person skilled in the art at the time when the present application was filed, that "the HTTP controller 13" transmits to "the WWW browser" the HTML document for "registering, correcting and deleting the telephone number list information" in a response to "the request of the WWW browser", a context of "the registration, the correction, and the deletion", set on "the WWW browser" based on the HTML document, is transmitted form "the WWW browser" to "the HTTP controller 13", "a telephone number list" is "registered, corrected, and deleted", based on "the registration, the correction, and the deletion". Petitioner thinks that the difference between transmission and reception information via an e-mail and transmission and reception information via a WEB technology is enough small for a person, skilled in the art at the time when the present application was filed, to interchange each other. Thus, Petitioner thinks that the difference is anticipated.

Accordingly, Petitioner thinks that the element D of claim 1 can easily be obtained, by interchanging the e-mail of the reference No.1, the e-mail being utilized to register "an address to which an error mail returns (an address of a sender)" in "the mail address table", into the well known WEB technology described in the reference No.2.

The effect:

As described above, in page 4, lines 4-8 of the remark filed on September 3, 2001, the patent owner claimed, as the effect of claim 1, " a user can register sender information using a HTTP, and can easily make the registration, by the structure that a HTML document for inputting data is output, based on a HTTP communication procedure, and that the sender information is stored in the memory, based on information input in the HTML document". However, at the time when the present application was filed, the WEB technology itself was well known. Thus, the effect, that a registration of information can be easier when a HTML document according to a HTTP is used, is merely one that the WEB technology

generally has. Therefore, Petitioner thinks that the effect, that the patent owner claimed, falls within a scope of an effect that is obviously obtained by the WEB technology. Petitioner thinks that the effect has no worth considering, in deciding whether the invention has a inventive step.

The conclusion:

As explained above, claim 1 is adopted to the well known WEB technology described in the reference No.2, for registering "an address to which an error mail returns (an address of a sender)" in "the mail address table" of a facsimile type e-mail apparatus described in the reference No.1. The effect of claim 1 is not beyond the effect that is obviously obtained by the WEB technology.

Accordingly, Petitioner thinks that claim 1 is easily created based on the reference No.1 and the reference No.2 by a parson skilled in the art before filing data of the present application, and meets Japanese Patent Law § 29 (2).

③-2. claim 4:

(said sender information is a sender name set in the e-mail)

As described above, based on the page 5, left column, lines 12-49 (the paragraphs [0021]-[0025]) of the reference No.1, it is "an address of a sender" that is set as "a destination" in a header. According to the description at the page 6, right column, lines 24-49 (the paragraph [0033]), "an address to which an error mail returns" is set as "the address of the sender". The reference No.1 does not disclose that "a sender name" is described in an e-mail.

However, it is not clear whether "the sender name" includes only one's real name consisted of a first name and a family name of a sender, "the sender name" includes a pseudonym such as a stage name, a pen name, and a nick name, or "the sender name" includes a handle name and further a code name. Any kinds of the technical effects do not occur when "the sender information" is limited to "the

sender name". This type of limitations is not a technological limitation since a concept of the limitation is changeable by individuals.

On the other hand, any information, which a user sets, can be registered in a mail account part of an e-mail address, otherwise information of the user overlaps with other users' one, according to each ISP (Internet Service Provider). Thus, the user can register a real name, a pseudonym, or a handle name of the user in the mail account part (for example, personal names such as "yamada", "toyoda", and "tanaka" are set in the account of the e-mail address described in Fig.3 of the reference No.1). It is ordinarily that a code name, set in the account, is used as the handle name of the user. Thus, a e-mail address is used as a personal name on a network, at the time when the present application was filed. In those days, the e-mail had already been popular.

Therefore, Petitioner thinks that "the address of the sender" or "the address to which the error mail returns", which are described in the reference No.1, corresponds to "the sender name".

Further, the reference No.3 relates to a facsimile apparatus which can receive an e-mail, as described at the page 2, left column, lines 23-26 (the paragraph [0001]). Thus, the reference No.3 has a motivation to combine with the reference No.1. The reference No.3 teaches that "a user name" of the user is registered in "a user (sender) table T2", at the page 4, right column, lines 10-17 (the paragraph [0030]), and that "the user name" is read when an e-mail is transmitted, at the page 5, left column, line 33- right column, line 14 (the paragraph [0039]). The reference No.4 relates to a method for controlling a network facsimile apparatus, as described at the page2, right column, lines 43-44 (the paragraph [0001]). The reference No.4 has a motivation to combine with the reference No.1. The reference No.4 teaches that "a user name" and "an address of a sender" are set in a "From" field of a header of an e-mail for transmitting "image data", at the page 5, left column, line 50- right column, line 12 (the paragraph [0037]).

Therefore, Petitioner thinks that at least a person, skilled in the communication technology field, can easily add "the user name" by adopting "the mail address table" of the reference No.1 to the user (sender) table T2, and can easily add "the user name" to "the e-mail" of the reference No.1 by adopting the header of the e-mail of the reference No.3.

Accordingly, Petitioner thinks that claim 4 is easily created based on the reference No.1 and the reference No.2, or based on the reference No.1-the reference No.4 by a parson skilled in the communication technology field, before filing data of the present application, and thus meets Japanese Patent Law § 29 (2).

③-3. claim 5:

(said sender information is a mail address set in the e-mail)

As described above, based on the page 5, left column, lines 12-49 (the paragraphs [0021]-[0025]) of the reference No.1, it is "an address of a sender" that is set as "a sender" in a header. According to the description at the page 6, right column, lines 24-49 (the paragraph [0033]), "an address to which an error mail returns" is set as "the address of the sender".

Accordingly, Petitioner thinks that claim 5 is easily created based on the reference No.1 and the reference No.2 by a parson skilled in the communication technology field, before filing data of the present application, and thus meets Japanese Patent Law § 29 (2).

③-4. claim 6:

The page 6, right column, lines 24-49 (the paragraphs [0033]) of the reference No.1 teaches that "an address to which an error mail returns" is set in an e-mail. Unlike at the page 5, left column, lines 12-49, this description does not teach where the address, to which the error mail returns, is described in the e-mail.

However, as the patent owner admitted at the page 5, col.10, lines 21-25 of the present patent publication, "a Mail From Command is a command which is transmitted and received between servers. The Mail From Command appears during transmission and reception between the servers, as shown in Fig.11 (the line 4 of Fig.11). The Mail From Command is usually utilized when an error mail returns." Thus, an mail address, which is used as an address to which an error mail returns, is set in the Mail From Command. Thus, the reference No.1 substantially teaches the elements of claim 6.

Accordingly, Petitioner thinks that claim 6 is easily created based on the reference No.1 and the reference No.2 by a parson skilled in the communication technology field, before filing data of the present application, and thus meets Japanese Patent Law § 29 (2).

③-5. claim 7:

The element E (a communication apparatus.):

As described at the page 2, right column, line 22-24 of the reference No.1 (the paragraph [0001]), the reference No.1 relates to a patent laid open publication regarding a facsimile type e-mail apparatus. The facsimile type e-mail apparatus includes "a communication apparatus". Thus, Petitioner thinks that the reference No.1 discloses the element E of claim 7.

The element A2 (a memory that stores a plurality of mail addresses set in a MAIL FROM COMMAND)

The page 6, right column, lines 36-38 of the reference No.1 (the paragraph [0033]) teaches that " The address of the sender, set in the e-mail for transmitting image data, is an address to which an error mail returns. This address is registered in the mail address table in which mail addresses are previously registered." However, the page 6, right column, lines 24-49 of the reference No.1 does not

disclose where "the address, to which the error mail returns," is described in an e-mail.

However, as the patent owner admitted at the page 5, col.10, lines 21-25 of the present patent publication, "a Mail From Command is a command which is transmitted and received between servers. The Mail From Command appears during transmission and reception between the servers, as shown in Fig.11 (the line 4 of Fig.11). The Mail From Command is usually utilized when an error mail returns." Thus, an mail address, which is used as an address to which an error mail returns, is set in the Mail From Command. Thus, "the address to which the error mail returns" correspond to "a mail address set in a MAIL FROM COMMAND".

The page 6, right column, lines 45-49 (the paragraph [0033]) teaches that " A way for inputting the address of the sender when transmitting the e-mail, is that a user puts a sender button in the panel 7 and inputs a sender ID, a pre-registered table for addresses of senders is displayed, and then the user designates one address of a sender from the pre-registered table." It is clear that a plurality of "addresses of senders (in other words, addresses to which en error mail returns)" are registered in the "pre-registered table for addresses of senders", since an "address of a sender" is selectively designated form "the pre-registered table."

Further, the page 6, left column, line 49- right column, line 1 (the paragraph [0030]) teaches that "a mail address, to which an error mail returns" is actually registered in "the external memory 4".

As above all factors are considered, "the external memory 4" corresponds to "a memory that stores a plurality of mail addresses set in a MAIL FROM COMMAND". Thus, the reference No.1 discloses the element A2 of claim 7.

The element B2 (a setting means that obtains a mail address from the memory and sets the mail address in the MAIL FROM COMMAND of an e-mail)

The page 6, right column, lines 45-49 of the reference No.1 suggests that "one address of the sender (an address to which an error mail returns)" is

selectively designated form "the pre-registered table for addresses of senders." The page 6, right column, lines 36-38 teaches that the "address of the sender (the address to which an error mail returns), " designated as above, is read from "the mail address table (the external memory 4)" and is described in an e-mail. Since the address of the sender is the address to which the error mail returns, the address is set in the MAIL FROM COMMAND, as explained above. In other words, the "address of the sender (the address to which an error mail returns)" is obtained form "the mail address table (the external memory 4)" and is set in the MAIL FROM COMMAND of the e-mail. Petitioner thinks that this exactly means that "a setting means that obtains a mail address from the memory and sets the mail address in the MAIL FROM COMMAND of an e-mail". Thus, Petitioner substantially discloses the element B2 of claim 7.

The element C2 (an E-mail transmitter that sets the obtained mail address in the MAIL FROM COMMAND and transmits the e-mail when transmitting scanned image data using the e-mail)

As explained in the element B1 above, "the address of the sender (the address to which an error mail returns)" is read from "the mail address table (the external memory 4)" and is described in the e-mail. This "e-mail is an "e-mail for transmitting image data" scanned by "the scanner 6", as described at the page 5, right column, lines 32-36 (the paragraph [0027]). On the other hand, since the address of the sender is the address to which the error mail returns, the address is set in the MAIL FROM COMMAND, as explained above. Such an "e-mail data" is "transmitted as an e-mail," as described at the page 5, left column, lines 12-43 (the paragraphs [0021]-[0023]). In other words, when the "image data", scanned by "the scanner 6", is transmitted as an "e-mail", the "address of the sender (the address to which an error mail returns)" is obtained from "the mail address memory (the external memory 4)" and is set in the MAIL FROM COMMAND. Petitioner thinks that this means "sets the obtained mail address in the MAIL

FROM COMMAND and transmits the e-mail when transmitting scanned image data using the e-mail". Thus, Petitioner thinks that the reference No.1 discloses the element C2 of claim 7.

The effect:

As described above, in page 4, lines 9-12 of the remark filed on September 3, 2001, the patent owner claimed, as the effect of claim 2, "a user can designate where the error mail returns by the structure that a mail address selectively is set in the MAIL FROM COMMAND". However, as explained above, since "an address of a sender (an address to which an error mail returns)" selectively set form addresses displayed in the panel 7, in the facsimile type e-mail apparatus of the reference No.1, the reference No.1 also can designate where the error mail returns. This is clear since the 7 page, right column, lines 13-16 of the reference No.1 discloses that "when image data is transmitted using an e-mail, a user can receive an error mail, which returns when an error occurs in the e-mail, not at the e-mail transmitting apparatus, but at the user's place". This is the exact same effect as the present invention. Thus, the effect, which the patent owner claimed, has already been disclosed in the reference No.1. Petitioner thinks that this effect has no worth considering, in deciding whether claim 7 has a inventive step.

The conclusion:

As explained above, Petitioner thinks that claim 7 is substantially described in the reference No.1, or claim 7 is easily created based on the reference No.1 a parson skilled in the communication technology field, before filing data of the present application, and thus meets Japanese Patent Law § 29 (2).

③-6. claim 8 (said memory stores a plurality of mail addresses, and a mail address can be selectively set as sender information when transmitting the e-mail)

As described above, based on the 5 page, left column, lines 43-47 (the paragraph [0023]) of the reference No.1 and the 6 page, right column, lines 36-38 and lines 45-49 (the paragraph [0033]) of the reference No.1, a plurality of "sender addresses (addresses to which an error mail returns)" are registered in the "sender address table". "A sender address (an address to which an error mail returns)" is selectively designated form "the sender address table" displayed in the "panel 7". The sender address is described in a header of an e-mail. Petitioner thinks that this means "said memory stores a plurality of mail addresses, and a mail address can be selectively set as sender information when transmitting the e-mail".

Thus, Petitioner thinks that claim 8 is easily created based on the reference No.1 a parson skilled in the communication technology field, before filing data of the present application, and thus meets Japanese Patent Law § 29 (2).

③-7. claim 9 (said memory stores a plurality of sender names, and a sender name can be selectively set as sender information when transmitting the e-mail)

As described above, Petitioner thinks that "a sender address of an e-mail" or "an address to which an error mail returns" corresponds to "a sender name".

Further, the reference No.3 teaches that "a user name" of the user is registered in "a user (sender) table T2", at the page 4, right column, lines 10-17 (the paragraph [0030]), and that "the user name" is read when an e-mail is transmitted, at the page 5, left column, line 33- right column, line 14 (the paragraph [0039]). The reference No.4 teaches that "a user name" and "an address of a sender" are set in a "From" field of a header of an e-mail for transmitting "image data", at the page 5, left column, line 50- right column, line 12 (the paragraph [0037]). Thus, Petitioner thinks that at least a person, skilled in the communication technology field, can easily add "the user name" by adopting "the mail address table" of the reference No.1 to the user (sender) table T2, and can easily add "the user name" to "the e-mail" of the reference No.1 by adopting the header of the e-mail of the reference No.3.

Accordingly, Petitioner thinks that claim 9 is easily created based on the reference No.1, or based on the reference No.1, No.3, and No.4 by a parson skilled in the communication technology field, before filing data of the present application, and thus meets Japanese Patent Law § 29 (2).

③-8. claim13:

Claim 13 is a method claim into which claim 1 is transformed.

Therefore, based on the same reasons as recited in claim 1, claim 13 is easily created based on the reference No.1 and the reference No.2 by a parson skilled in the communication technology field, before filing data of the present application, and thus meets Japanese Patent Law § 29 (2).

③-9. claim 16:

Claim 16 is a method claim into which claim 7 is transformed.

Therefore, based on the same reasons as recited in claim 7, claim 16 is easily created based on the reference No.1 by a parson skilled in the communication technology field, before filing data of the present application, and thus meets Japanese Patent Law § 29 (2).

③-10. claim 17:

The element A4 (a step for obtaining a sender name from a memory that stores a plurality of sender names when transmitting an e-mail)

The page 6, right column, lines 24-49 (the paragraph [0033]) teaches that "an address to which an error mail returns" is set as "the address of the sender". Based on the description, "the address to which an error mail returns" is registered in "the mail address table", and is described as "a sender address of an e-mail" in the e-mail. However, The reference No.1 does not disclose that "a sender name" is described in the e-mail.

However, it is not clear whether "the sender name" includes only one's real name consisted of a first name and a family name of a sender, "the sender name" includes a pseudonym such as a stage name, a pen name, and a nick name, or "the sender name" includes a handle name and further a code name. This type of limitations is not a technological limitation since a concept of the limitation is changeable by individuals.

On the other hand, any information, which a user sets, can be registered in a mail account part of an e-mail address, otherwise information of the user overlaps with other users' one, according to each ISP (Internet Service Provider). Thus, the user can register a real name, a pseudonym, or a handle name of the user in the mail account part (for example, personal names such as "yamada", "toyoda", and "tanaka" are set in the account of the e-mail address described in Fig.3 of the reference No.1). It is ordinarily that a code name, set in the account, is used as the handle name of the user. Thus, a e-mail address is used as a personal name on a network, at the time when the present application was filed. In those days, the e-mail had already been popular.

Therefore, Petitioner thinks that "the address of the sender" or "the address to which the error mail returns", which are described in the reference No.1, corresponds to "the sender name".

The page 6, right column, lines 45-49 (the paragraph [0033]) teaches that " A way for inputting the address of the sender when transmitting the e-mail, is that a user puts a sender button in the panel 7 and inputs a sender ID, a pre-registered table for addresses of senders is displayed, and then the user designates one address of a sender from the pre-registered table." It is clear that a plurality of "addresses of senders" are registered in the "pre-registered table for addresses of senders", since an "address of a sender" is selectively designated form "the pre-registered table."

Further, the page 6, left column, line 49- right column, line 1 (the paragraph [0030]) teaches that "a mail address, to which an error mail returns" is actually registered in "the external memory 4".

As above all factors are considered, "the external memory 4" corresponds to "a memory that stores a plurality of sender names when transmitting an e-mail". That a sender address, selected from the memory, is described in an e-mail, corresponds to "obtaining a sender name from a memory that stores a plurality of sender names when transmitting an e-mail". Thus, the reference No.1 substantially discloses the element A4 of claim 17.

The element B4 (a step for setting the obtained sender name as a sender name of the e-mail)

The page 6, right column, lines 36-38 (the paragraph [0033]) teaches that the designated "address of the sender (the address to which an error mail returns) " is read from "the mail address table (the external memory 4)" and is described in an e-mail. In other words, the "address of the sender (the address to which an error mail returns)" is obtained form "the mail address table (the external memory 4)" and is set in the e-mail. Petitioner thinks that this exactly means that "setting the obtained sender name as a sender name of the e-mail," since "address of the sender (the address to which an error mail returns) " corresponds to ""a sender name," as explained above. Thus, Petitioner discloses the element B4 of claim 17.

The element C4 (a step for setting the obtained sender name as the sender name of the sender information and transmitting the e-mail when transmitting the scanned image data using the e-mail)

As explained in the element B4 above, "the address of the sender (the address to which an error mail returns)" is read from "the mail address table (the external memory 4)" and is described in the e-mail. This "e-mail is an "e-mail for transmitting image data" scanned by "the scanner 6", as described at the page 5,

right column, lines 32-36 (the paragraph [0027]). Specially, as described at the page 5, left column, lines 12-43 of the reference No.1 (the paragraph [0021]-[0023]), "the scanner 6" scans document, "image data" is input thereby, the image data is transformed into "character codes", "a destination, a sender, and a transforming way into character codes" are added to "data encoded by BASE64", to which a "TIFF" header is added, and then an "e-mail data" is generated. Such an "e-mail data" is "transmitted as an e-mail," as described at the page 5, left column, lines 48-49 (the paragraph [0023]). In other words, when the "image data", scanned by "the scanner 6", is transmitted as an "e-mail", the "address of the sender (the address to which an error mail returns)" is obtained from "the mail address memory (the external memory 4)" and is set in the "e-mail." The e-mail is transmitted. Petitioner thinks that this means "sets the obtained sender information in the e-mail and transmits the e-mail when transmitting scanned image data by utilizing the e-mail". Thus, Petitioner thinks that the reference No.1 discloses the element C4 of claim 17.

The effect:

As described above, in page 4, lines 13-18 of the remark filed on September 3, 2001, the patent owner claimed, as the effect of claim 17, "even though a user, not having an mail address, transmits an e-mail by using the present apparatus, another user at the receiving side can easily know who is a sender of the e-mail without setting an mail address by the structure that only user name can selectively be set." However, the effect, which claim 17 directly causes, is only that a user can change "a sender name," but is not that "only user name can selectively be set." In other words, Petitioner thinks that the effect, that "only user name can selectively be set," requires both to be able to set "a user name" and not to link the user name to any information. Based on the patent owner's claim, both "a user name" and "a mail address" can be set in an e-mail, and "the user name" is not set in a way that the user name is not linked to "the mail address." Thus, claim

17 can not cause the effect that the patent owner claimed, since claim 17 is not structured in the above way.

Further, the page 5, left column line 50- right column, line 12 of the reference No. 4 discloses that both "a user name" and "a mail address of a sender user" are set in an e-mail, and this technology is well known.

Accordingly, the effect, that the patent owner claimed, is not one that claim 17 directly causes. Thus, Petitioner thinks that this effect has no worth considering, in deciding whether claim 17 has a inventive step.

The conclusion:

As explained above, Petitioner thinks that claim 17 is easily created based on the reference No.1 a parson skilled in the communication technology field, before filing data of the present application, and thus meets Japanese Patent Law § 29 (2).

(5) The conclusion

As explained above, claims 1, 4-9, 13, 16, and 17 meet Japanese Patent Law § 29 (2). Thus, these claims should be canceled, based on Japanese Patent Law § 113 and § 114 (2).

Accordingly, Petitioner respectfully requests Commissioner for Patents that the patent be canceled.

4. The evidences

Reference No.1: Japanese Laid-Open Patent Publication Hei 10-307769

Reference No.2: Japanese Laid-Open Patent Publication Hei 10-191010

Reference No.3: Japanese Laid-Open Patent Publication Hei 10-341306

Reference No.4: Japanese Laid-Open Patent Publication Hei 10-28217

5. lists of attachments

(1) request for protest to issue of patent	two copies
(2) reference No.1:	an original and two copies
(3) reference No.2:	an original and two copies
(4) reference No.3:	an original and two copies
(5) reference No.4:	an original and two copies

[Derwent Week] 1999-05 [Patent No.] JP10307769 A [Patentee]MATY/MATSUSHITA GRAPHIC COMMUNICATION SYSTEMS

[Title]Electric mail transmission control method for facsimile involves adding control instruction in telegraphic message which is transmitted with control code to receiving terminal enabling it to perfor...

[Primary Accession No.] 1999-055752 [Issue Date] 2002.08.05
[Cross-References PANs] 2001-400382, 2002-450635
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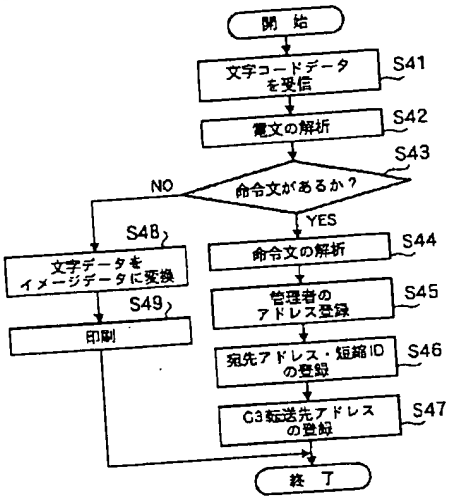
(Electrical) T01-H07C1, W01-A05B, W01-A06E1, W01-C05B1C, W02-J03C



[Abstract]
First Section: The method involves adding a predetermined unique character code along with control code in an electronic mail telegraphic message. The message is then transmitted to the receiving terminal. In a receiving terminal, the control code is extracted, analyzed and predetermined control action is performed, depending on the instruction.
ADVANTAGE : Enables control of receiver terminal easily. Improves operativity.

Reference No.1 (Japanese Laid-Open Patent publication Hei 10-307769)

[claims]

[claim 1]

An e-mail transmitting method comprising:

describing, in an e-mail, a control command including a predetermined unique character code at a transmitting apparatus;

transmitting the e-mail;

extracting the control command form the received e-mail at a receiving apparatus;

analyzing the control command; and

executing a predetermined control, based on the control command.

[claim 2]

The e-mail transmitting method according to claim 1, further

transmitting an e-mail in which a plurality of control commands are successively described at the transmitting apparatus,

successively executing a plurality of commands at the receiving apparatus.

[claim 3]

The e-mail transmitting method according to claim 2, wherein the control command includes a execution command sentence having a predetermined code, a controlled object line, and a command end sentence having the same code as the predetermined code.

[claim 4]

The e-mail transmitting method according to claims 1-3, further

describing a command for registering a destination as the control command at the transmitting apparatus,

transmitting an e-mail address of the destination, a facsimile telephone number of the destination, and an ID number corresponding to them,

registering the destination and the ID number corresponding to the destination when the control command is detected form the received e-mail at the receiving apparatus.

[claim 5]

The e-mail transmitting method according to claim 4, further

describing, in the e-mail, a registered e-mail address corresponding the ID number, as an e-mail address of a destination or an e-mail address of a sender, when the receiving apparatus transmits an e-mail and when the ID number is input.

[claim 6]

The e-mail transmitting method according to claim 5, further

describing, in the e-mail, an e-mail address downloaded based on the ID number, as the e-mail address of the destination or the e-mail address of the sender, when an apparatus other than the receiving apparatus transmits an e-mail, when the other apparatus downloads an e-mail address stored in a memory of the receiving apparatus and an ID number corresponding to the e-mail address before the transmission, and when the downloaded ID number is input at the transmission.

[claim 7]

The e-mail transmitting method according to claim 5 or 6, further

registering an ID number corresponding to a plurality of e-mail addresses,

inputting the ID number when transmitting an e-mail, and

executing a broadcast transmission to the plurality of e-mail addresses.

[claim 8]

The e-mail transmitting method according to claims 5-7, wherein the transmitting apparatus, which transmits an e-mail based on a registered e-mail address, is a facsimile type e-mail apparatus,

the facsimile type e-mail apparatus comprises:

a scanner that scans a document and transforms the scanned document into image data;

a transformer that transforms the image data into a format of an e-mail;

a transmitter that adds, to the image data, an address of a destination and the address of the facsimile type e-mail apparatus, and transmits the e-mail.

[claim 9]

The e-mail transmitting method according to claim 8, wherein the facsimile type e-mail apparatus transforms the image data into the format of the e-mail, after the transmitted image data are coded with a code system utilized for a facsimile communication and the coded image data are stored in a memory.

[claim 10]

The e-mail transmitting method according to claim 5 or 6, wherein the transmitting apparatus, which transmits an e-mail based on a registered e-mail address, further comprises:

a transmitter configured to:

describe, in an e-mail, an e-mail address corresponding to a registered ID number by inputting the registered ID number;

add, to the e-mail, an e-mail address to which an error mail returns when an error is detected, the e-mail address distinct form the e-mail address of the transmitting apparatus; and

transmits the e-mail.

[Detailed description of the invention]

[0001]

[Industrial application]

This present invention relates to a facsimile type e-mail apparatus in which a user can transmit and receive image data in the same way as a facsimile communication.

[0002]

[Prior art]

Recently, facsimile apparatuses are used in many offices since the facsimile apparatuses can transmit and receive image data, based on easy operations. However, the facsimile apparatuses have some problems. For example, a sender can not know whether or not the transmitted image data reaches a person to whom the sender wants to transmit the image data. Everyone can read image data that a receiving facsimile apparatus received. Regarding the former problem, a receiving facsimile apparatus can return a communication result report to a transmitting facsimile apparatus. Thereby, the problem can be solved. On the other hands, regarding the latter problem, transmitting image data with an ID can be stored in a memory of the receiving facsimile apparatus. Thereby, it can prevent someone else form reading the image data. However, both ways substantially solve the problems since it is not so easy for users to operate the above both ways.

[0003]

On the contrary, the Internet is rapidly popularized over all the world. People using e-mails are also sharply increased in offices. An e-mail is transmitted and received at a personal computer (PC) or at a work station (WS) which individual person uses. Thereby, the above problems, which the facsimile apparatus has, does not occur to the e-mail.

[0004]

However, data, which are transmitted or received by e-mails, are mainly character codes, which are input by keyboards. Image data are not transmitted or received by the e-mails since it is not technically easy to transform the image data into formats which can be transmitted or received by the e-mails. In other words, an operation, for transmitting the image data with the e-mail, is complicated.

[0005]

A facsimile apparatus, to which the e-mail is applied, is provided to develop the operation. For example, it is Japanese Laid-Open patent publication Hei 02-172348. Figure 6 is an outline block diagram showing a prior art's

facsimile apparatus to which the e-mail is applied, as a prior art. 601 is a CPU which controls the facsimile apparatus. 602 is a ROM which stores a program. 603 is a RAM which is used for program data. 604 is a modem which is connected to a public telephone line. 605 is a printer which prints image data. 606 is a scanner which scans image data. 607 is a panel which inputs instructions for scanning image data, identification information of senders, and identification information of receiving people. 608 is a coder/decoder which codes and decodes image data. 609 is a computer I/F which is connected to a computer, transmits and receives an e-mail.

[0006]

Transmission and reception by the above facsimile apparatus is explained, as the following. First, an operator sets a document on the scanner 606. The operator inputs a telephone number of a destination and identification information of a sender form the panel 607, and then puts a start bottom. The scanner 606 scans image data, the coder/decoder 608 codes the image data, and the modem 604 transmits the image data to the destination via the pubic telephone line, based on a facsimile procedure. As an e-mail using character codes, a transmission result report returns to a terminal apparatus of the sender from the computer I/F 609 via a host computer.

[0007]

The reception by the facsimile apparatus is the following. First, a receiving person inputs user identification information form the panel 607. The user identification information is stored the RAM 603. When the facsimile apparatus receives a facsimile document via the modem 604 and identification information is receives with the facsimile document, the facsimile apparatus compare the received identification information with the stored user identification information. When the received identification information matches the stored user identification information, the facsimile apparatus notifies a terminal apparatus of

the user of receiving the facsimile document, using an e-mail via the computer I/F. The receiving image data are printed by the printer 605.

[0008]

[Problems to be solved by the invention]

However, the above prior art has the following problems. A notice is transmitted to a terminal apparatus of a receiving person form a receiving facsimile apparatus. The notice indicates that the receiving facsimile apparatus received a facsimile document. However, a sending person can not know whether the facsimile document actually reached the receiving person. When neither the sending person nor the receiving person has the same facsimile apparatus having the above structure, the receiving facsimile apparatus also can not confirm the receiving person of the facsimile document during a facsimile process. In this case, the above notice can not be transmitted to the terminal apparatus of the receiving person form the receiving facsimile apparatus. In the other words, this above transmission of image data is performed to a facsimile apparatus, like an ordinary facsimile transmission. Therefore, this transmission does not have the same convenience as an e-mail transmission, in which a PC or a WS of the receiving person can be designated and a data transmission is thus performed freely.

[0009]

The invention solves the above problems which the prior art has. The invention relates to a facsimile type e-mail apparatus which can transmit image data to a individual person and which is easy to operate. The purpose of the invention is to provide an e-mail transmission control method specially suitable for controlling a receiving apparatus such as the facsimile type e-mail apparatus.

[0010]

[Means for solving the problems]

To achieve the above purpose, the present invention comprises, as a receiving apparatus, a apparatus (a facsimile type e-mail apparatus) which has

functions to transform image data, which is obtained form a document, into a format for an e-mail transmission, and to transmit the e-mail on a network. A transmitting terminal apparatus describes, in an e-mail, a control command including a predetermined unique character code, and transmits the e-mail. The receiving apparatus extracts the control command form the received e-mail at a receiving apparatus, analyzes the control command, and executes a predetermined control, based on the control command. By using the present invention, the transmitting terminal apparatus, such as a personal computer and a work station, transmits, to the receiving apparatus, the e-mail in which the control command is described. Thereby, it becomes easy to control the receiving apparatus form the transmitting apparatus. Specially, the present invention is suitable for controlling a receiving apparatus in which input means and display means are inadequacy. For example, when the transmitting apparatus has an e-mail address table, and transmits an e-mail using the e-mail address table, it will make the operation more efficient.

[0011]

The invention of claim 1 describes, in an e-mail, a control command including a predetermined unique character code and transmits the e-mail at a transmitting apparatus. It also extracts the control command form the received e-mail, analyzes the control command, and executes a predetermined control, based on the control command at a receiving apparatus. Thereby, the transmitting apparatus can easily generate the control command, and the receiving apparatus can easily detect and analyze the control command. Thus, it will be easy to control the receiving apparatus.

[0012]

The invention of claim 2, in the e-mail transmitting method of claim 1, further transmits an e-mail in which a plurality of control commands are successively described at the transmitting apparatus, and successively executing a plurality of commands at the receiving apparatus. Thereby, it will be easy to

command, to the receiving apparatus, different types of controls and a type of successive controls.

[0013]

In the invention of claim 3, in the e-mail transmitting method of claim 2, the control command includes a execution command sentence having a predetermined code, a controlled object line, and a command end sentence having the same code as the predetermined code. Thereby, it is certainly detected whether the control command exists in the e-mail, the context of the control command, and the end of the control command. Thus, it will be possible to certainly control the receiving apparatus.

[0014]

In the invention of claim 4, in the e-mail transmitting method of claims 1-3, the transmitting apparatus further describes a command for registering a destination as the control command, transmits an e-mail address of the destination, a facsimile telephone number of the destination, and an ID number corresponding to them. The receiving apparatus registers the destination and the ID number corresponding to the destination when the control command is detected form the received e-mail. Thereby, the e-mail address and the ID number corresponding to the e-mail address can be stored in the memory of the receiving apparatus. Specially, this invention can make the operation more efficient, when a personal computer or a work station register large size of an address table in the receiving apparatus, such as a facsimile apparatus in which input means and display means are inadequacy.

[0015]

The invention of claim 5, in the e-mail transmitting method of claim 4, further describes, in the e-mail, a registered e-mail address corresponding the ID number, as an e-mail address of a destination or an e-mail address of a sender, when the receiving apparatus transmits an e-mail and the ID number is input. Thereby, when the receiving apparatus transmits an e-mail, the address of the

destination can be described in the e-mail, which is transmitted based on the registered address table, merely by inputting the ID number.

[0016]

The invention of claim 6, in the e-mail transmitting method of claim 5, further describes, in the e-mail, an e-mail address downloaded based on the ID number, as the e-mail address of the destination or the e-mail address of the sender, when an apparatus other than the receiving apparatus transmits an e-mail, when the other apparatus downloads an e-mail address stored in a memory of the receiving apparatus and an ID number corresponding to the e-mail address before the transmission, and when the downloaded ID number is input at the transmission. Thereby, when the apparatus other than the receiving apparatus transmits the e-mail, even though the apparatus does not have a memory, if the apparatus has a RAM having the same capacity as a size of the address table stored in the receiving apparatus, the apparatus can download the table form the receiving apparatus. Thus, like claim 5, the address of the destination can be described in the e-mail, which is transmitted based on the registered address table, merely by inputting the ID number.

[0017]

The invention of claim 7, in the e-mail transmitting method of claim 5 or 6, further registers an ID number corresponding to a plurality of e-mail addresses, inputs the ID number when transmitting an e-mail, and executes a broadcast transmission to the plurality of e-mail addresses. Thereby, when the receiving apparatus transmits an e-mail, the plurality of addresses of the destinations can be described in the e-mail, which is transmitted based on the registered address table, merely by inputting the ID number. Thus, the invention can make them easy both to register a list of e-mail addresses of destinations for broadcast, and to instruct the broadcast.

[0018]

In the invention of claim 8, in the e-mail transmitting method of claims 5-7, the transmitting apparatus, which transmits an e-mail based on a registered e-mail address, is a facsimile type e-mail apparatus. The facsimile type e-mail apparatus comprises a scanner that scans a document and transforms the scanned document into image data, a transformer that transforms the image data into a format of an e-mail, and a transmitter that adds, to the image data, an address of a destination and the address of the transmitting apparatus, and transmits the e-mail. In the invention of claim 9, in the e-mail transmitting method of claim 8, the facsimile type e-mail apparatus transforms the image data into the format of the e-mail, after the transmitted image data are coded with a code system utilized for a facsimile communication and the coded image data are stored in a memory. Thereby, image data can easily be transmitted form the facsimile type e-mail apparatus, which transmits the e-mail by the same operation as an ordinary facsimile apparatus, based on the address table having the registered e-mail address and the ID number corresponding to the registered e-mail address. Further, claim 9 can structure the facsimile type e-mail apparatus by using the same circuit as being utilized for scanner of the ordinary facsimile apparatus.

[0019]

In the invention of claim 10, in the e-mail transmitting method of claim 5 or 6, the transmitting apparatus, which transmits an e-mail based on a registered e-mail address, inputs a registered ID number. An e-mail address is described, in an e-mail, corresponding to the registered ID number. An e-mail address is also add, to the e-mail. The e-mail address is one to which an error mail returns when an error is detected, and is distinct form the e-mail address of the transmitting apparatus. Then, the e-mail is transmitted. Thereby, when transmitting image data using the e-mail, a user can receive an error mail which is notified when an error occurs to the e-mail, not at the transmitting apparatus, but at a the user's place.

[0020]

[Embodiment of the invention]

An embodiment of the present invention is explained, using figures, as the followings. Figure 1 is an outline block diagram showing the facsimile type e-mail apparatus which is adequately applied to the present invention, and which can transmit image data by an easy operation, like an ordinary facsimile apparatus. In figure 1, 1 is a CPU which controls the facsimile type e-mail apparatus. 2 is a ROM which stores a program. 3 is a RAM which is used for program data. 4 is an external memory, like a hard-disk, which stores codes image data. 5 is a format transformer which transforms the coded image data into an e-mail format. 6 is a scanner which scan image. 7 is a panel which a user instructs to scan the image or inputs an e-mail address of an destination. 8 is a coder/decoder which codes the scanned image data or decodes received image data. 9 is a LAN controller which is connected to a LAN, transmits and receives an e-mail via the Internet.

[0021]

Fig.2 is a flow chart, being used when the facsimile type e-mail apparatus transmits image data. First, at the step S1, a user sets a document on the scanner 6, inputs a destination (alphabets and digits) of an e-mail form the panel 7, and pushes the start button. Next, at the step S2, the document, which is set on the scanner 6, is input as image data, and at the step S3, the image data is compressed into a predetermined compression type, such as i.e. MR, MMR, JBIG, by compressor/decompressor 8 and is stored in external the memory 4. When documents consist of a plurality of pages, the plurality of pages are stored as one file in the external memory 4.

[0022]

Next, the stored image data is converted into character codes by the format converter 5. This process is performed, based on the Internet e-mail standard, as called MIME (Multipurpose Internet Mail Extensions). At the step S4, data is read from the external memory 4 by each page, and a TIFF (Tag Image File Format) header is added to the data. At the step S5, BASE 64 encoding is performed. BASE 64 is a coding method in which binary data are transformed into seven bit

text codes at a transmitting side, and in which they are transformed back to seven bit codes at a receiving side, similar to i.e. an uuencode, an ish. MIME adopts BASE 64. This is why the uuencode does not work well since unusual characters are often used in a header of an e-mail, but BASE 64 solves this problem by assigning different codes to such unusual characters.

[0023]

Next, at the step S6, a destination, a sender, and a transforming way into character codes are described in the BASE 64 encoded data, a header is added to the BASE 64 encoded data, and an e-mail data is generated. The mail address of the destination and the mail address of the sender are input by a keyboard, but can be input by a communication through a PW or a WS. The latter way is more easily to input them, and more efficiently to perform a transmission operation. This inputting way will be explained later. Next, at the step S7, the first page of the e-mail data starts to be transmitted as an e-mail form the LAM controller 9. When a plurality of pages of image data are stored in the external memory 4, a second page of image data is transformed into the e-mail format during transmitting a first page of the e-mail data. This process repeats until the final page. Then, the series of this procedure ends.

[0024]

In addition, in this embodiment, the facsimile type e-mail apparatus simultaneously performs the transmission of the e-mail and the generation of the subsequent e-mail data since it is connected with the network via the LAN controller 9. However, when the facsimile type e-mail apparatus is connected with a public telephone line, it transmits the e-mail after all pages of the e-mail data are generated.

[0025]

As explained above, the facsimile type e-mail apparatus can easily transmit image data as an e-mail to any apparatus, in which a e-mail program supporting MIME is installed. Thus, the facsimile type e-mail apparatus can transmit image

data directly to PC or WS of an individual person. Since people other than the person, to whom the image data is transmitted, can not see the transmitted image data, the facsimile type e-mail apparatus can has the same characters as an e-mail communication, such as immediateness and secrecy.

[0026]

When the above facsimile type e-mail apparatus receives or outputs an e-mail, a process for the reception or the output is reverse. In the other words, first, the LAN controller 9 receives image data of the e-mail, and the image data is stored in the external memory 4. Next, the format reverse transformer 10 transforms the image data of the e-mail into a format of facsimile data, based on BASE. The coder/decoder 8 decodes the transformed image data, and the decoded image data is stored in the external memory 4. After that, the image data is printed by the printer 11.

[0027]

Next, a procedure is explained, the procedure is for registering a mail address of a destination and a mail address of a sender into the facsimile type e-mail apparatus. It is possible to input the mail address of the destination and the mail address of the sender, directly by utilizing a keyboard, but it is also possible to input the mail address of the destination and the mail address of the sender, form PW or WS by utilizing an e-mail communication. The latter way is easier to input them, and makes an operation for transmitting the e-mail more efficient.

[0028]

Fig.3 shows a sample of a format utilized for registration of the mail address of the destination and the mail address of the sender when the mail address of the destination and the mail address of the sender are registered by an e-mail. The e-mail is generally composed of a head 31 and a main context 32. @ mail list of the main context 32 is a control command for commanding to register a mail address which is described following the control command, a corresponding abbreviated ID number to the mail address, and an address to which an error mail

returns. 'yamada@xx.yy.zz', 'toyoda@xx.yy.zz' show e-mail addresses of destiantion. 'taro', 'kiyo' show corresponding abbreviated ID numbers corresponding to the e-mail addresses, 'aaa@bb.cc.dd' shows an address for an error mail when an error occurs. G1 is a control command for commanding broadcast mail to three destinations of 'tanaka@xx.yy.zz', 'yamada@xx.yy.zz', and 'yoshida@xx.yy.zz'. A abbreviated ID number is designated for the three mail addresses. @from shows an e-mail address of a sender of an Internet facsimile, and an e-mail address of a manager is usually registered as the e-mail address of the sender. The e-mail address of the manager is utilized as an address to which an error mail returns. Thus, when the address of the destination is registered, and when the address, to which the error mail returns, is the e-mail address of the manager, the address, to which the error mail returns, is not needed to register. When the address, to which the error mail returns, is not needed to register, the error mail returns to ' mmm@xx.yy.zz'. @G3recv is a control command for commanding to transform received facsimile data in to an Internet format, and to transmit the transformed facsimile data to the e-mail address 'nnn@xx.yy.zz' of a predetermined PC or WS when the facsimile type e-mail apparatus receives facsimile data not through the controller 9 but through a public telephone line. Similarly, for example, it is possible to have a control command, such as @rcv. When facsimile data is received, a notification of the receiving facsimile data may be transmitted to a predetermined terminal device with an e-mail, by utilizing the control command @rcv. On the other hand, for example, it is also possible to have a control command, such as @send. When an e-mail or facsimile data is received, the received e-mail or the received facsimile data may be transmitted to another facsimile apparatus through the public telephone line, by utilizing the control command @send. In this case, a facsimile number of the destination is registered, instead of the e-mail address.

[0029]

In addition, in the above embodiment, the control command for indicating the registration is described in the context of the e-mail, but the control command can be described in the header of the e-mail by adding a unique code, which indicates the control command and is usually not described in the e-mail, to the control command. For example, a code such as "Subject : !!$" may be described. Since a title is generally described after "Subject :", a reception can judge whether a received e-mail is an unusual e-mail for the control command, by detecting the "!!$" after "Subject:". Codes or descriptions of the control command can be modified.

[0030]

Next, a registration method is explained by using a flow chart of Fig. 4. The registration method is performed by the facsimile type e-mail apparatus when the above e-mail for a registering indication is received. First, at the step S 42, when the LAN controller 9 receives character codes of an e-mail, a main context of the e-mail is analyzed. Next, it is judged whether the main context of the e-mail includes descriptions indicating commands. When a command exists in the main context, a character line following the command is analyzed at the step S 44. Next, at the step S 45, a mail address of the manager is registered in the external memory 4. At the step S 46, a mail address of a destination, an abbreviated ID number corresponding to the mail address, and a mail address, to which an error mail returns, are registered in the external memory 4. At the step 47, a mail address, to which a G3 fax is forwarded, is registered in the external memory 4. On the other hand, when no command exists, character data is transformed into image data at the step 48. At the step 49, the image data is printed.

[0031]

By using the above method, a user can easily input a list of e-mail addresses of destinations. The e-mail, in which the control command is described, does not always require to be received directly by the facsimile type e-mail apparatus. For example, a mail server on a network can receive the e-mail, in

which the control command is described. The mail server stores the e-mail as an address table in a memory. When the facsimile type e-mail apparatus turns ON or an e-mail application starts in the facsimile type e-mail apparatus, the facsimile type e-mail apparatus can download the above e-mail. By using this way, the facsimile type e-mail apparatus does not need to prepare a memory having a huge capacity.

[0032]

The procedure for the registration was explained above. By using this procedure, procedures other than for the above registration of the e-mail address also can be performed by the receiving apparatus, without using a special protocol between a PC or a WS and an instructing apparatus.

[0033]

A process for transmitting image data is explained by using a flow chart of Fig.5. The process is one for transmitting image data, based on e-mail address table which is registered by the above process. First, at the step S51, a user pushes a destination list button of the panel 7. At the step S52, the user inputs a ID number. At the step S53, a mail address of a sender corresponding to the ID number is read form the mail address table which is previously registered. The mail address of the sender is displayed on the display 7. Next, at the step S54, when the user pushes the start button, image data input form the scanner 6 is transformed, and is transmitted (the step S55-S57). The detail of this transforming process has already been explained by using Fig.2. In addition, the address of the sender, set in the e-mail for transmitting image data, is an address to which an error mail returns. This address is registered in the mail address table in which mail addresses are previously registered. When the address, to which an error mail returns, is not registered in the mail address table, a mail address of the manager will be set in the e-mail. The mail address of the manager is set as a default value. Thus, the error mail will return to at least a terminal device. Further, when a mail address of the sender is input when transmitting the e-mail, the mail address has

priority to be described in the e-mail. A way for inputting the address of the sender when transmitting the e-mail, is that a user puts a sender button in the panel 7 and inputs a sender ID, a pre-registered table for addresses of senders is displayed, and then the user designates one address of a sender from the pre-registered table. This way is easy to input the address of the sender.

[0034]

[Effect of the invention]

As explained above, based on the invention of claim 1, the transmitting apparatus can easily generate a control command, and the receiving apparatus can detect and analyze the control command Thus, it will be easy to control the receiving apparatus. Based on the invention of claim 2, it will be easy to command, to the receiving apparatus, different types of controls and a type of successive controls. Based on the invention of claim 3, it is certainly detected whether the control command exists in the e-mail, the context of the control command, and the end of the control command. Thus, it will be possible to certainly control the receiving apparatus. Based on the invention of claim 4, a plurality of e-mail addresses and the ID numbers corresponding to the e-mail addresses can be stored in the memory of the receiving apparatus. Specially, this invention can make the operation more efficient, when a personal computer or a work station register large size of an address table in the receiving apparatus, such as a facsimile apparatus in which input means and display means are inadequacy. Based on the invention of claim 5, when the receiving apparatus transmits an e-mail, the address of the destination can be described in the e-mail, which is transmitted based on the registered address table, merely by inputting the ID number. Based on the invention of claim 6, when the apparatus other than the receiving apparatus transmits the e-mail, even though the apparatus does not have a memory, if the apparatus has a RAM having the same capacity as a size of the address table stored in the receiving apparatus, the apparatus can download the table form the receiving apparatus. Thus, like claim 5, the address of the

destination can be described in the e-mail, which is transmitted based on the registered address table, merely by inputting the ID number. Based on the invention of claim 7, when the receiving apparatus transmits an e-mail, the plurality of addresses of the destinations can be described in the e-mail, which is transmitted based on the registered address table, merely by inputting the ID number. Thus, the invention can make them easy both to register a list of e-mail addresses of destinations for broadcast, and to instruct the broadcast. Based on the invention of claim 8 and claim 9, image data can easily be transmitted form the facsimile type e-mail apparatus, which transmits the e-mail by the same operation as an ordinary facsimile apparatus, based on the address table having the registered e-mail address and the ID number corresponding to the registered e-mail address. Further, claim 9 can structure the facsimile type e-mail apparatus by using the same circuit as being utilized for scanner of the ordinary facsimile apparatus. Based on the invention of claim 10, when image data is transmitted using an e-mail, a user can receive an error mail, which is transmitted when an error occurs in the e-mail, not at the e-mail transmitting apparatus, but at the user's place.

[Descriptions of the figures]

[Fig.1]

an outline block diagram showing the facsimile type e-mail apparatus which is applied to the present invention

[Fig.2]

a flow chart used when image data are transformed into a format for an e-mail transmission and are transmitted.

[Fig.3]

a format sample of an e-mail utilized for indicating registration of mail addresses.

[Fig.4]

a flow chart showing a registration process when an e-mail for a registration indication is received.

[Fig.5]

a flow showing a transmission process based on an e-mail address table.

[Fig.6]

an outline block diagram showing a prior art's facsimile apparatus to which the e-mail is applied.

[Descriptions of the legends]

4 external memory

5 format transformer

9 LAN controller

[Derwent Week] 1998-39 [Patent No.] JP10191010 A [Patentee]NIDE/NEC CORP

[Title]Facsimile machine connectable to LAN has circuit controller which sends facsimile message signal from facsimile message transmitting unit to destination facsimile machine after transmission-address telephon...

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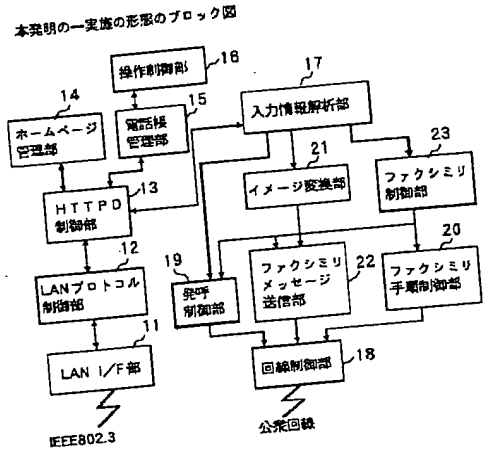

[Abstract]
First Section: The machine has an input evaluation unit (17) which separates a transmission-address telephone number and a message text which are input via a process controller, and decides the execution of facsimile transmission. A facsimile message transmitting unit (22) generates a facsimile message, which can be received by a destination facsimile machine, according to the message text converted into an image information.
A circuit controller (18) transmits a facsimile message signal from the facsimile message transmitting unit to the destination facsimile machine after the transmission-address telephone number is dialled, based on the facsimile transmission execution decision result.
ADVANTAGE: Eliminates need for installing new software for user since WWW browser is utilised, thus development of software corresponding to each operating environment is made unnecessary.

Reference No.2 (Japanese Laid-Open Patent publication Hei 10-191010)

The paragraph [0001]

" The present invention relates to a facsimile apparatus which can connect to a local area network (LAN) and which can perform a facsimile transmission form external device connected to the LAN."

The paragraph [0023]

" A HTTPD controller 13 performs a HTTPD (Hyper Text Transfer Protocol Deamon) function by using a data stream transfer function of a TCP/IP protocol. The data stream transfer function is performed by a LAN protocol controller 12. HTTP (Hyper Text Transfer Protocol) is a protocol for transferring a file (i.e. a home page) described in a HTML (Hyper Text Markup Language). A server, which transmits a HTML file to a world wide web (WWW) browser response to a request form the browser based on the HTTP protocol, is called HTTPD."

The paragraph [0024]

" A home page manager 14 stores a home page file of the facsimile apparatus described in HTML, and outputs the home page file in a response to a request of the HTTPD controller 13. Thus, when a WWW browser requests the facsimile apparatus to transmit the home page, the HTTPD controller 13 obtains the home page file form the home page manager 14 and transmits it to the WWW browser."

The paragraph [0025]

" A telephone list manager 15 stores telephone list information. The telephone list information consists of a pair of a sender name, which is registered by the user and which is often used, and facsimile number. The telephone list

manager 15 transforms the telephone list information into the HTML format and outputs it, response to a request form the HTTPD controller 13. Thus, when the WWW browser requests the facsimile apparatus to transmit the telephone list, the HTTPD controller 13 obtains, form the telephone list manager 15, a telephone list file described in HTML, and transmits it to the WWW browser."

The paragraph [0042]

"In the embodiment of the present invention, the telephone list information is merely referred on the WWW browser, but can technically be registered, corrected, and deleted on the WWW browser. The latter will be more useful for a product put into the market."

PATENT ABSTRACTS OF JAPAN

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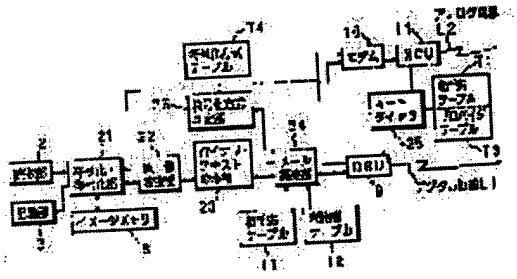
YASUMOTO TADAYUKI

(54) COMMUNICATION TERMINAL EQUIPMENT, HAVING ELECTRONIC MAIL RECEIVING FUNCTION

(57)Abstract:
PROBLEM TO BE SOLVED: To transfer an electronic mail once received to another computer for processing by processing the mail by its own computer and deciding whether the original contents of the mail can be displayed, based on the information contained in the header part of the mail.
SOLUTION: In a reception mode, the header information separated at a mail-editing part 24 is sent to an encoding system decision part 26, which decides whether the header information has the encoding system that can be processed by the communication terminal stored in a coding system table T4. Thus, the electronic mails are received, while those mails which cannot be processed by a communication terminal equipment, are identified. Such a communication terminal can transfer a received electronic mail of such a data form that can be processed by itself to another communication terminal equipment of the computer that has been designated previously. Therefore, the electronic mail is processed by the communication terminal equipment of the transfer destination and can be displayed or outputted as a hard copy.



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(54) Communication terminal device

(57) An electronic mail generally includes a header information and a main part information. The communication terminal device(T) of the present invention is provided with functions of receiving electronic mail from computer network and determines the encoding method and data type of the main part information by analyzing the header information of the received electronic mail. When the device(T) has determined that it cannot process the received electronic mail by itself, it notifies as such to the user and then transfers the electronic mail to another predetermined communication terminal device such that the mail can be further processed there.

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Description

BACKGROUND OF THE INVENTION

Technical Field

The present invention relates to a communication terminal device having electronic mail transmission/reception functions and more particularly, to a facsimile device or the like that is capable of transmission and reception of electronic mail by connection to a computer communication network such as the internet or the like.

Background Art

Among communication terminal devices, there are types of facsimile devices that connect to analog lines and types of devices that connect to digital lines. The former are generally G3 devices where the later are generally G4 devices. However, it is general for a G4 device to be provided with functions that also make it perform as a G3 device.

Recently, the use of computer communication networks such as the internet or the like has become widespread. The excellent error correction functions of computer networks and the fact that communication between computers not only domestically but worldwide is possible by the user only bearing the communication charges to the nearest contract provider (company that provides connection to the computer communication network) may be given as reasons for this.

However, as the communication procedures of conventional G3 and G4 facsimiles differ from those of computer communication utilizing a computer communication network as described above, the direct communication from a facsimile device to a computer network is impossible. However, image data transmitted or received by normal facsimile communication can be transmitted/received as an electronic mail via a computer communication network if the data is converted to data of an electronic mail format such as a TIFF (Tagged Image File Format) file or the like.

However, on a communication terminal device that not only works as a facsimile device but also has a function which allows image data transmitted/received by normal facsimile communication to be transmitted/received as an electronic mail via a computer communication network by converting the image data to the data of electronic mail format, as decoding and reproduction of the received data is possible only when the original facsimile image data has been encoded by a specific encoding format, if electronic mail of other encoding formats is received from the computer communication network, that data can not be processed nor the original contents displayed.

SUMMARY OF THE INVENTION

With regard to the situation as described above, it is an object of the present invention to propose a communication terminal device that determines whether it is able to process and display or print out the original contents of received electronic mail from information included in the communication control information (usually known as the header) of the electronic mail.

The communication terminal device of the present invention is provided with electronic mail reception means that receives electronic mail having a main part of encoded image data and communication control information including at least information relating to that encoding method, and encoding format determination means that determines the encoding format of the main part from the communication control information of the received electronic mail.

Furthermore, the communication terminal device of the present invention is further provided with notification means for, when the encoding format determination means determines that the main body of the electronic mail received by the electronic mail reception means has been encoded by a format that the device is not able to process, displaying or printing out that result.

Yet further, the communication terminal device of the present invention is provided with memory means and electronic mail transfer means, the memory means temporarily memorizing an electronic mail and the electronic mail transfer means transferring the mail to a pre-specified other communication terminal device when the encoding format determination means determines that the main body of the electronic mail received by the electronic mail reception means has been encoded by a format that the device is not able to process.

Accordingly, on a communication terminal device of the present invention as above, in the case where the main body of the electronic mail received by the reception means has been determined to be electronic mail encoded by an encoding format that the device is not able to process, that fact is notified thus the user is able to take appropriate steps such as re-requesting transmission by normal facsimile communication or the like.

Furthermore, on a communication terminal device of the present invention as above, in the case where the main body of the electronic mail received by the reception means has been determined to be electronic mail encoded by an encoding format that the device is not able to process, as that electronic mail is automatically transferred to another pre-specified communication terminal device for processing, the probability that the electronic mail is correctly processed

is increased.

That is, when the image data transmitted/received by normal facsimile communication is converted to electronic mail format data and transmitted/received via computer communication network, since the communication terminal device T of the present invention determines whether received electronic mail may be processed and the original contents can be displayed or not based on information included in the header part of the electronic mail, if the communication terminal device T receives electronic mail of an encoding format which can be received but not processed, the device T makes such determination as above after it once received the data and then may transfer the data to other computers etc. for further processing.

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is a block diagram showing the hardware arrangement of the communication terminal device of the present invention.

Figure 2 is a block diagram schematically showing the flow of data and the functional arrangement of the communication terminal device of the present invention.

Figure 3 is a schematic drawing showing examples of contents of the third party table.

Figure 4 is a schematic drawing showing examples of contents of the user (sender) table.

Figure 5 is a schematic drawing showing examples of contents of the provider table.

Figure 6(A) and Figure 6(B) are schematic drawings showing examples of contents of the encoding format tables.

Figure 7 is a schematic drawing showing examples of contents of the transfer destination table.

Figure 8 is a time chart showing the log-in procedures to a server by the communication terminal device of the present invention.

Figure 9 is a time chart showing the communication procedures for sending electronic mail to the internet by the communication terminal device of the present invention.

Figure 10 is a flowchart showing the operation procedures of the communication terminal device of the present invention at times of electronic mail transmission.

Figure 11 is another flow chart showing the operation procedures of the communication terminal device of the present invention at times of electronic mail transmission.

Figure 12 is yet another flow chart showing the operation procedures of the communication terminal device of the present invention at times of electronic mail transmission.

Figure 13 is a schematic drawing showing one example of contents of the header of electronic mail transmitted by the communication terminal device of the present invention.

Figure 14 is a schematic drawing showing one example of an electronic mail transmission report transmitted to third party after transmission of an electronic mail by the communication terminal device of the present invention.

Figure 15 is a flowchart showing the operation procedures of the communication terminal device of the present invention at times of electronic mail reception.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Hereafter, an embodiment of the present invention will be described based on the drawings. In the embodiment described below, the present invention is applied to a communication terminal device constructed such that it can transmit/receive image data normally sent by facsimile communication as electronic mail. Furthermore, the internet is used as the computer communication network in the embodiment.

Firstly, the hardware arrangement of a communication terminal device T of the present invention will be described with reference to Fig.1. The communication terminal device T of the present invention is provided with functions for communication (transmission and reception) with the internet in addition to G3 and G4 facsimile communication functions.

A CPU 1 controls each part of the hardware via a bus 12 and it 1 also executes software functions such as encoding, decoding, image (TIFF) conversion, binary-text conversion, mail editing, communication procedures and the like (described later).

A scanner 2 scans a document by a scanner using a CCD or the like and outputs dot image data converted to a bilevel image. Recording part 3 is provided with a printer such as an electro-photographic type and reproduces as a hard copy and records image data received from another G3 or G4 facsimile device by facsimile communication or image data received from the internet.

Display 4 is provided with display means such as a liquid crystal display (LCD) or CRT display or the like, and displays the operating status of the communication terminal device T of the present invention, performs the input instruction display by a touch panel method during operation, and displays the image data of the document to be transmitted and the received image data.

Operation part 5 is provided with letter keys, a key pad (number keys), quick dial keys, one-touch dial keys, various types of function keys and the like necessary for operation of the communication terminal device T of the present invention. It should be noted that it is also possible to substitute some of the keys of the operation part 5 by having the aforementioned display part 4 as a touch panel type.

A ROM 6 is pre-stored with each type of software programs necessary for operation of the communication terminal device T of the present invention. A RAM 7 includes SRAM or a flash memory or the like and apart from memorizing temporary data generated when the software is executed, memorizes each type of table to be described later. It should be noted that when a flash memory is used in the RAM 7, the contents of each type of table do not disappear even when the power supply is cut because of power failures, moving the device to another location and the like. An image memory 8 includes a DRAM or the like and memorizes the image data to be transmitted and the received image data.

A TA/DSU (Terminal Adaptor/Digital Service Unit) 9 performs the conversion of transmission/reception data and voltage so that the device can be connected to digital lines L1 using a baseband transmission format. In this example, a modem 10 is provided with data modem functions as well as conventional fax modem functions. An NCU (Network Control Unit) 11 performs the operations of connecting and releasing the analog lines L2.

The communication terminal device T of the present invention has the hardware structure as described above and while obviously having functions of a normal G3/G4 device, may also transmit and receive image data converted to a TIFF file as electronic mail. The functions for that extra purpose are stored in the ROM 6 as software programs and will be described hereafter.

Fig.2 is a block drawing schematically showing the flow of data and the functional arrangement of the communication terminal device of the present invention. It should be noted that the parts corresponding to Fig.1 (hardware elements) are labeled with the same reference number. In addition to those seen in Fig. 1, each block of the encoding/decoding part 21, image converter 22, binary/text converter 23, mail editor 24 and autodialer 25 to which no corresponding reference number is attached in Fig. 1 are provided as functional blocks where processing is performed by the CPU 1 in accordance with software programs pre-stored in the ROM 6(the details of each will be described later).

Encoding/decoding part 21 encodes dot image data scanned by the scanner 2 by coding methods such as MH, MR, MMR or the like determined as facsimile communication standards, or decodes encoded image data received from an external device and outputs this to the recording part 3 as a hard copy. Hereafter, the image data encoded by this kind of encoding method will be known as "G3 format image data". It should be noted that the image memory 8 memorizes G3 format image data transmitted from the encoding/decoding part 21 and in reverse, sends memorized G3 format image data to the encoding/decoding part 21.

At times of transmission, image converter 22 converts the G3 format image data to a TIFF (Tagged Image File Format) format being an image format generally used by computers and at times of reception, performs conversion from the TIFF format to G3 format image data. It should be noted that the TIFF specifications were made public by Adobe Systems and for each data type such as bilevel, grey scale, full color and the like, a corresponding TIFF class is defined respectively for data handling. Class F being one of these classes defines G3 format image data. Accordingly, conversion of G3 format image data to TIFF format is possible by the relatively simple processing such as attaching Class F TIFF header information to the start of the G3 format image data. Hereafter, the G3 format image data to which Class F TIFF header information has been attached is called "TIFF image data".

At times of transmission, the binary/text converter 23 converts the binary data of the TIFF image data obtained from the image converter 22 to text data and at times of reception, performs the reverse, in short, converts text data to binary data. This is because there are computers on the internet which can not handle electronic mail of binary data. In order to reliably deliver electronic mail to a third party, the binary data of TIFF image data or the like is first converted to text data when it is to be transmitted. It should be noted that in RFC (Request For Comments) 822 being a document published by IETF (Internet Engineering Task Force), text data handled by the internet is standardized as a 7 bit code.

If conversion to text data is performed using base 64 being one encoding type of MIME (Multipurpose Internet Mail Extensions) as an example, the binary data is converted to text data by the replacement with one of 64 characters (large and small letters of the alphabet, numerals, +,/) in 6 bit units. It should be noted that the standards relating to MIME are set by the aforementioned RFC and apart from the abovementioned base 64, "7 bit", "8 bit", "binary" and other encoding types have been defined.

The mail editor 24 adjusts the file to be transmitted to an electronic mail format or, in reverse, divide the received electronic mail into the main body and the communication management information (mail header), then only taking out the TIFF image data(the main body). In actuality, at times of transmission, the mail editor 24 edits the data to an electronic mail format by adding mail header information as communication management information to the TIFF image data converted to text data. At times of reception, the mail editor 24 takes out only the TIFF image data converted to text data by separating the mail header from the electronic mail format data. These kind of operations by the mail editor 24 are indispensable as the attachment of predetermined header information is necessary for internet electronic mail and at times of transmission, header information including "Date:" (that electronic mail's transmission date and time), "From:" (the sender of that electronic mail), "To:" (the address for that electronic mail), "Subject:" (the subject of that

electronic mail. However in the communication terminal device T of the present information, is image conversion method), "MIME:", "Content-Transfer-Encoding:" (the binary text conversion method of that electronic mail) and the like, is attached to the head of the TIFF image data as shown in Fig.13 and at times of reception, these header information parts are separated.

It should be noted that at times of reception, header information separated by the mail editor 24 is sent to the encoding method determination part 26 and determination is performed whether processing is possible by a binary text conversion method table T4A and image conversion method table T4B which will be described later.

Autodialer 25 sends third party telephone number data to the TA/DSU 9, modem 10 or NCU 11 in order to dial the telephone number read from the third party table T1 or the provider table T3 existing in the RAM 7 as hardware or to call the telephone number read from the transfer destination table T5.

Hereafter, each type of table will be described. As shown in Fig.3, the third party table T1 records the third party name, internet e-mail address, facsimile number and facsimile classification (G3 or G4) for each of quick dial keys or one-touch dial keys.

As shown in Fig.4, the user (sender) table T2 records the name of the user of the communication terminal device T of the present invention, his/her internet e-mail address, the provider classification and the user ID and password for logging on to the internet. It should be noted that when a plurality of users use a common single communication terminal device in an office or the like, registering of each user and selecting a particular user name at times of transmission is possible.

As shown in Fig.5, the provider table T3 memorizes the telephone number of the provider to be used when connecting to the internet, the line classification (analog or digital), the provider name and the provider classification. The provider classification corresponds to the provider classification of user table T2 and is for discriminating the log in procedures that differ for each provider. When a single provider has a plurality of telephone lines or when a plurality of providers are to be used, each of those telephone numbers may be registered and selected at times of transmission.

As shown in Fig.6(A), the binary text conversion method table T4A memorizes a "1" against those conversion methods which the binary/text converter 23 is able to process and memorizes "0" against those which the binary/text converter 23 cannot process. In the given example, "7 bit", "base 64" and "binary" may be processed while "8 bit" can not be processed.

Furthermore, as shown in Fig.6(B), the image conversion method table T4B memorizes a "1" against those conversion methods which the image converter 22 is able to process and memorizes a "0" against those which the image converter 22 cannot process. In the given example, only "TIFF(G3)" may be processed.

As shown in Fig.7, the transfer destination table T5 memorizes the internet e-mail address to which, when the communication terminal device of the present invention receives electronic mail which it can not process, the electronic mail is to be transferred. Furthermore, the order of priority of the transfer destination is also specified.

Next, the procedures when electronic mail is sent to the internet will be described. The protocol used at each layer of the OSI reference model are shown in the table below.

Table 1

Layer 7 (Application Layer) Layer 6 (Presentation Layer) Layer 5 (Session Layer)	Transmission : SMTP (Simple Mail Transfer Protocol) Reception : POP(Post Office Protocol)
Layer 4 (Transport Layer)	TCP (Transmission Control Protocol)
Layer 3 (Network Layer)	IP(Internet Protocol)
Layer 2 (Data Link Layer) Layer 1 (Physical Layer)	V.34 (Analog Lines) etc. X.25 (Digital Lines) etc.

Firstly, the log in procedures will be described. When a line is established to the computer of the provider (hereafter known as server S) as shown in the time chart of Fig.8, the communication terminal device T of the present invention continues transmitting the user ID and password in accordance with the PAP (Password Authentication Protocol) until an Ack or Nack is received from the server S. When Nack is received from the server S, the communication terminal device T of the present invention disconnects the lines and thereafter re-dials. Conversely, when Ack is received from the server S, the log in of the communication terminal device T of the present invention to the server S is completed.

After completion of log in to the server S, as shown in the time chart of Fig.9, the communication terminal device T of the present invention transmits electronic mail by, for example, SMTP (Simple Mail Transfer Protocol) being a stand-

ard protocol used when carrying out the communication of electronic mail on the internet.

Firstly, the communication terminal device T of the present invention makes a request for SMTP connection to the server S. If connection is possible, the server S sends a response code 220 to the communication terminal device T of the present invention. Then, the communication terminal device T of the present invention transmits its own domain name by a "HELO" command. In response to this, if the server S is able to recognize the domain name of the communication terminal device T of the present invention, it sends a response code 250 and the domain name of itself(the server S). Thereafter, the communication terminal device T of the present invention starts the transmission of electronic mail. When the transmission of electronic mail is complete, the communication terminal device T of the present invention transmits a "QUIT" command. When the server S replies with response code 221 in response to this, the SMTP is completed. After completion of transmission of electronic mail, log off from the server S is performed and the lines are disconnected.

Next, the operations of the communication terminal device T of the present invention when electronic mail is transmitted will be described with reference to the flow chart shown in Figs.10 through 12.

Firstly, a document that the user is to transmit is set on the document table (not shown) of the communication terminal device T of the present invention (step S1) and the provider or lines to be used are selected from the table T3 by an operation of the keys or the like of the operation part 5 (step S2). Furthermore, the user himself/herself enters the passcode for selecting the registered user name and selects the user name from the table T2 (step S3). The reason why the user is identified by a passcode is to prevent use by an unauthorized user. This passcode may also be used as the password for connection to the internet. Next, the user either presses the start key (not shown) after choosing the short dial number of the third party or selects the third party from table T1 by pressing the one-touch key (step S4).

The provider or line, user name and third party selected in accordance with the procedure above are temporarily stored in the RAM 7.

The communication terminal device T of the present invention sequentially scans the whole document one page at a time as dot image data, then encodes all the pages by an MMR method at the encoding/decoding part 21 and stores it as G3 format image data in the image memory 8 (step S5). Then, the CPU 1 reads out the third party previously specified by the user by the short dial number or one touch dial and then temporarily being memorized in the RAM 7. Furthermore, the data relating to that third party is read out from the third party table T1.

As a result, when no internet e-mail address is registered in the third party table T1 (step S6), as transmission of electronic mail can not be performed, the CPU 1 carries out a facsimile transmission of the G3 format image data stored in the image memory 8 in the G3 format after conversion to an analog voice signal or in G4 format by a digital signal conversion(step S7). If an internet e-mail address is registered, the CPU 1 performs processing as described below in order to transmit the G3 format image data as electronic mail.

As G3 format image data can not be transmitted directly to the internet, it is converted to an electronic mail format as described below (step S8). Firstly, TIFF converter 22 attaches a TIFF Class F header information to the start of the G3 format image data and produces TIFF image data. As this TIFF image data is binary data, the binary/text converter 23 converts this to text data (step S9).

Furthermore, the mail editor 24 attaches an electronic mail header to the TIFF image data converted to text data (step S10). At least "From:", "To:" and "Subject:" are included in this header as shown in Fig.13. The internet e-mail address of the user selected from the user table T2 at step S3 is set in "From:", the internet e-mail address of the third party selected from the third party table T1 at step S4 is set in "To:" and "TIFF (G3)" indicating that it is electronic mail including TIFF format image data is set in "Subject:". Furthermore, "base 64" indicating the binary/text conversion method is set in "Content-transfer-Encoding".

In this way, when the data in the electronic mail format is completed, the CPU 1 performs a dial up connection to the internet. Firstly, the CPU 1 determines the classification (analog/digital) of the lines of the provider selected at step S2 from the provider table T3 (step S11), sets the modem 10 when the lines are analog (step S12), sets the TA/DSU 9 when the lines are digital (step S13), calls the telephone number of the selected provider (step S14) and waits for a response (step S15).

When a line has been established with the provider, the CPU 1 logs-in in accordance with the aforementioned PAP, transmits the electronic mail by SMTP, logs off after the completion of transmission (step S16) and disconnects the lines (step S17).

Thereafter, the CPU 1 starts a 10 minute timer (step S18) and waits (step S19). After 10 minutes have elapsed, the CPU 1 reads out the classification (G3/G4) and facsimile number of the third party selected at step S4 from the third party table T1 (step S20), sets the modem 10 when it is G3 and the TA/DSU 9 when it is G4 (steps S21, S22) and calls (step S23). After a response is received from the third party facsimile device (step S24), the CPU 1 transmits a transmission report of which one example is shown in Fig.14 by either G3 or G4 procedures (step S25) and disconnects the lines (step S26).

The transmission report shown in Fig.14 will be described hereafter. The format of this transmission report is preregistered in the ROM 6. The transmission time (Year, Month, Date, a.m./p.m. Hour, Minute), destination, transmission

source, a short statement notifying that electronic mail has been sent (or will be sent), information relating to the electronic mail which has been sent (or will be sent) and part of the image data which has been sent (or will be sent) are indicated.

The transmission date and time, destination, transmission source, data type, number of pages and data volume are indicated in the information relating to the electronic mail. The transmission date and time are automatically indicated by the clock provided in the communication terminal device T of the present invention. The destination is indicated as the internet e-mail address of the third party selected from the third party table T1 being the "To:" part of the electronic mail header. The transmission source is indicated as the internet e-mail address of the user selected from the user table T2 being the "From:" part of the electronic mail header. The data type is indicated as "TIFF (G3)" being the "Subject:" part of the electronic mail header. Furthermore, the number of pages corresponds to the number of pages of the document and the data volume corresponds to the volume of data after conversion to TIFF image data.

In the aforementioned embodiment, after transmitting the image data of a document or the like as electronic mail to the internet, notification is performed by G3 or G4 facsimile communication after a predetermined time period has elapsed (in the embodiment, 10 minutes). Accordingly, when the recipient receives the facsimile, quick reception of the electronic mail by the predetermined procedures is possible as a certain amount of time has already elapsed since the sender transmitted the electronic mail to the internet. This predetermined time period may be suitably set corresponding to the state of the recipient, the state of the lines and the like. Furthermore, as the binary data is converted to text data, electronic mail can be reliably transmitted.

It should be noted that not only the aforementioned embodiment, but another embodiment is also possible in which transmission of electronic mail to the internet occurs after notification by facsimile of the transmission of electronic mail to the internet. In this case, there is a possibility that the electronic mail has not been delivered to the recipient's server when the recipient attempts to receive the electronic mail. However, the recipient is able to quickly know that the sender has transmitted electronic mail.

Furthermore, the communication terminal device T of the present invention may be arranged such that the transmission of electronic mail to the internet and the notification by facsimile be carried out in parallel. In this case, as it is necessary to use two telephone lines simultaneously, the digital lines L1 are used for the transmission of electronic mail and the analog lines L2 are used for facsimile transmission (however, this is limited to G3 format transmission). Accordingly, by performing transmission of electronic mail to the internet and the notification by facsimile in parallel, the processing time of the entire procedure may be shortened.

Yet further, the transmission to the internet of image data other than bilevel image data such as grey scale or color as electronic mail is of course possible. Further, the same applied for data other than image data such as voice or moving images.

Yet further still, the present invention is also effective when applied to the computer communication network other than the internet such as an in-office LAN or the like.

Incidentally, electronic mail transmitted as described above to the internet from the communication terminal device T of the present invention can be received if the receiver side communication terminal device has a similar arrangement to the communication terminal device T of the present invention. Rephrased, if the communication terminal device T of the present invention receives electronic mail which a communication terminal device having a similar arrangement has transmitted by converting the TIFF image data to text data, it (T) is able to convert that text data back to TIFF image data and furthermore return it to the original dot image data. However, the electronic mail which may be processed by the communication terminal device T of the present invention is only that which has been processed according to one of the methods recorded as "1" in the binary text conversion method table T4A and image conversion method table T4B.

In short, the communication terminal device T of the present invention is able to receive electronic mail while identifying electronic mail which it cannot process. Hereafter, the processing procedures at that time will be described with reference to the flowchart of Fig.15.

When electronic mail is received, the CPU 1 of the communication terminal device T of the present invention determines the header part and the main mail part sent to the mail editor 24, then reads out the header and sends it to the encoding format determination part 26 (step S31). Then, as "TIFF (G3)" is indicated in the "Subject:" part of the header if the electronic mail has been sent from a communication device of similar construction to the communication terminal device T of the present invention, a determination of whether processing is possible or not can be performed by the encoding method determination part 26 by reference to the contents of the image conversion method table T4B. Furthermore, as "base 64" is indicated in the "Content-Transfer-Encoding" part, a determination of whether processing is possible or not can be performed by the encoding method determination part 26 by reference to the contents of the binary/text conversion method table T4A (step S32). Accordingly, in this case, the CPU1 of the communication terminal device T of the present invention performs a series of processing whereby it receives the electronic mail, converts the text data to binary data by the binary text converter 23, converts the binary data to G3 format image data in the image converter 22 and stores the G3 format image date in the image memory 8 (step S33).

If there is other electronic mail transmitted, the processing returns to step S31 and processing as above is per-

formed (step S34) and if there is no further mail, communication is concluded (step S38). Then, the G3 format image data stored in the image memory 8 is sent to the encoding/decoding part 21 after communication has been completed, decoded by the part 21, converted to bilevel dot image data and output from the recording part 3 as hard copy.

On the other hand, when it is determined by the encoding method determination part 26 at step S31 that the received electronic mail is of a data format which can not be processed by the communication terminal device T of the present invention, it is determined from the contents of the transfer destination table T5 whether another communication terminal device such as a computer or the like to which that unprocessable electronic mail is to be sent has been pre-specified (step S35), and when such a specification has been made, that electronic mail is stored in that state in the RAM 7 (step S36). It should be noted that, when no such specification as above has been made, the fact that electronic mail has been received but can not be processed is memorized in the RAM 7 and the information such as "Unprocessable mail has been received" is displayed in the display 4 (step S37).

Further, it is preferable to prepare a list such as an "Unprocessable mail list" in the RAM 7 and to record the header part of the electronic mail which could not be processed in the rows of the list.

Thereafter, once communication has been completed (step S38), when electronic mail for which transfer has been specified is stored in the RAM 7 (step S39), that electronic mail is transferred to the pre-registered communication terminal device (step S40). The processing of this transfer is similar to normal electronic mail transmission processing.

Accordingly, when the communication terminal device T of the present invention receives electronic mail of a data format which it(T) cannot process by itself, it(T) can send that mail to a pre-specified other communication terminal device such as a computer or the like and thus can process the data by the pre-specified transfer destination communication terminal device and output the result as a display or hard copy.

It should be noted that when electronic mail of an extremely specific data format is received, it is of course possible to search through the internet for a computer which is able to process that data format and request the processing of the data to such a computer.

Furthermore, in the abovementioned embodiment, G3 and G4 formats have been given as examples of facsimile communication but it is not limited to these and naturally, facsimile communication of other formats may be used.

As described above, the communication terminal device T of the present invention determines whether received electronic mail may be processed and the original contents can be displayed or not based on information included in the header part of the electronic mail. Thus, when the image data transmitted/received by normal facsimile communication is converted to electronic mail format data and transmitted/received via computer communication network, if the communication terminal device T of the present invention receives electronic mail of an encoding format which can be received but not processed, the device makes such determination as above after it once received the data and then may transfer the data to other computers etc. for further processing.

Claims

1. A communication terminal device characterized in that it comprises:

   reception means for receiving electronic mail, the electronic mail having an encoded main part and a header part including information relating to that encoding;

   determination means(26) for determining whether decoding of the main part of the electronic mail is possible based on the header information of the electronic mail received by the reception means; and

   notification means for notifying that the main part cannot be decoded when the determination means has determined as such.

2. A communication terminal device characterized in that it comprises:

   reception means for receiving electronic mail, the electronic mail having an encoded main part and a header part including information relating to that encoding;

   determination means(26) for determining whether decoding of the main part of the electronic mail is possible based on the header information of the electronic mail received by the reception means;

   first memory means(7) for memorizing the received electronic mail;

   second memory means(T5) for memorizing a predetermined transfer destination; and

transfer means for transferring electronic mail memorized in the first memory means(7) to the transfer destination memorized in the second memory means(T5) when it is determined by the determination means(26) that the main part can not be decoded.

3. The communication terminal device as in claim 1 or 2, wherein the encoded main part of the electronic mail includes facsimile image data.

4. The communication terminal device as in claim 2, further including search means for, when the determination means(26) determines the main part of the received electronic mail to be unprocessable, searching through available network for a terminal device which is able to process the main part of that electronic mail and requesting further processing of the electronic mail to that terminal device.

5. The communication terminal device as in claim 4, wherein the transfer means may transfer the electronic mail memorized in the first memory means(7) to the terminal device discovered by the search means.

FIG. 1

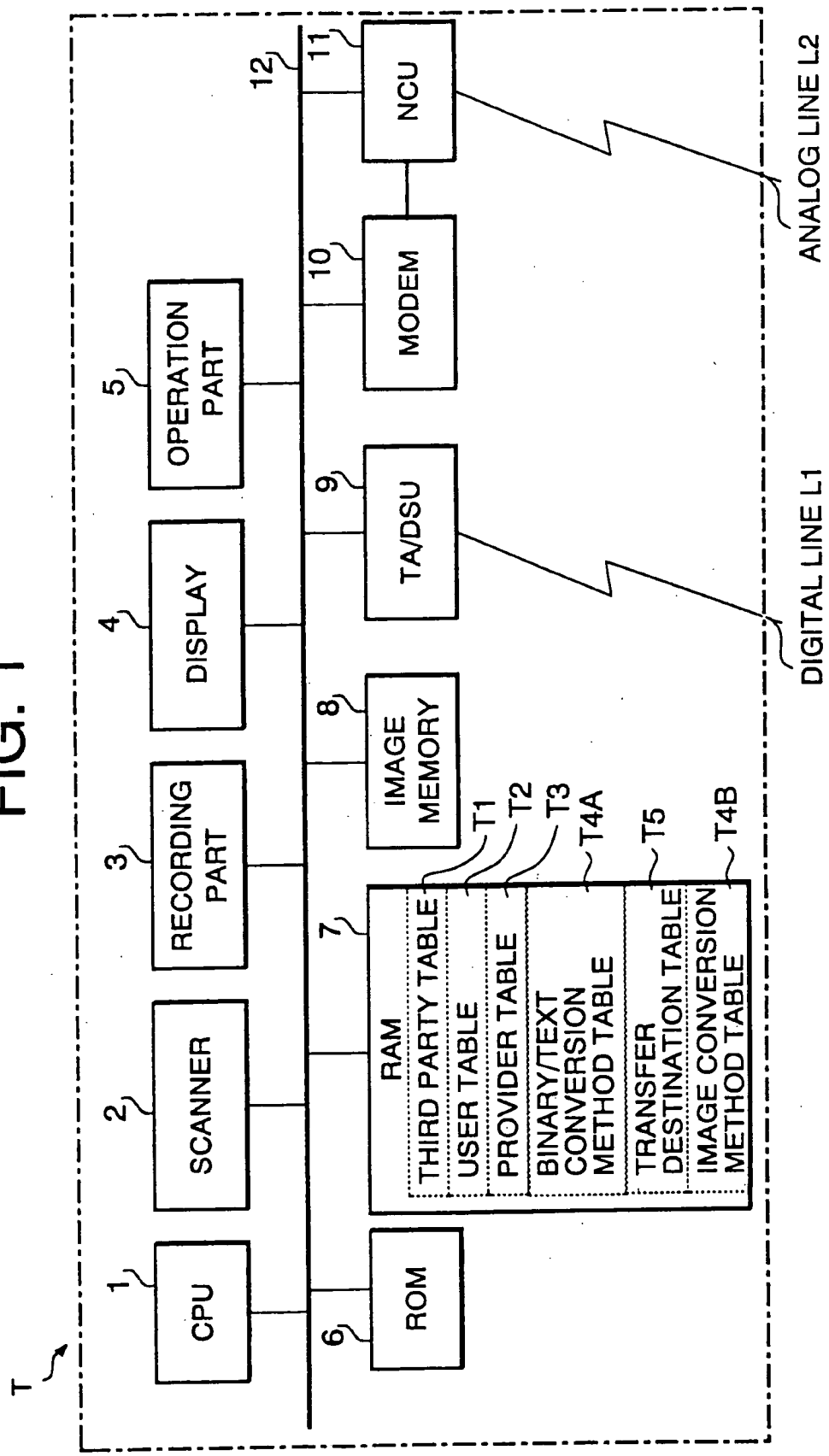
T
CPU
1
SCANNER
2
RECORDING PART
3
DISPLAY
4
OPERATION PART
5
ROM
6
RAM
7
IMAGE MEMORY
8
TA/DSU
9
MODEM
10
NCU
11
12
THIRD PARTY TABLE
USER TABLE
PROVIDER TABLE
BINARY/TEXT CONVERSION METHOD TABLE
TRANSFER DESTINATION TABLE
IMAGE CONVERSION METHOD TABLE
T1
T2
T3
T4A
T5
T4B
DIGITAL LINE L1
ANALOG LINE L2

FIG. 2

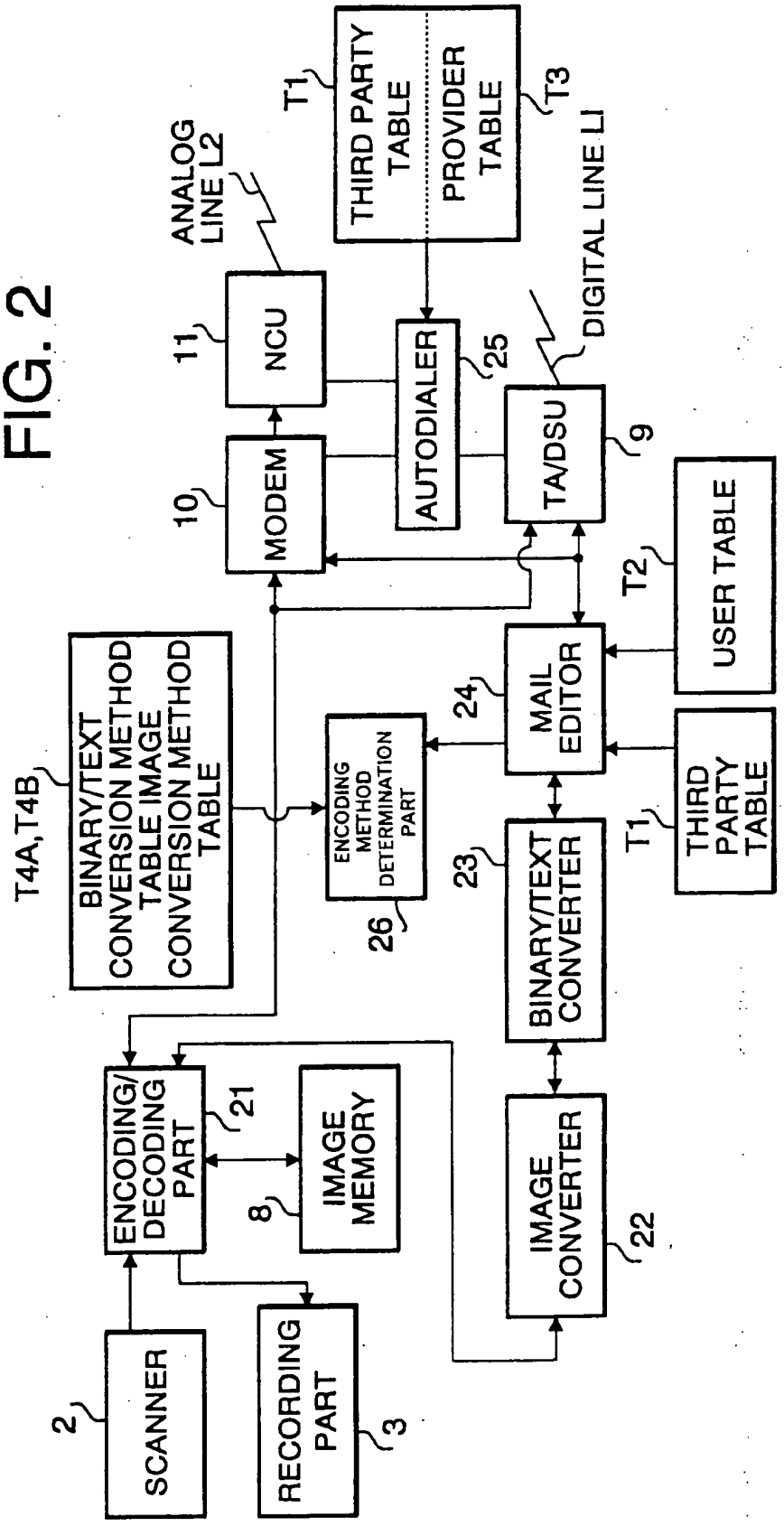
THIRD PARTY TABLE
PROVIDER TABLE
T1
T3
ANALOG LINE L2
DIGITAL LINE LI
11
NCU
AUTODIALER
25
TA/DSU
9
10
MODEM
T2
USER TABLE
T4A, T4B
BINARY/TEXT CONVERSION METHOD TABLE IMAGE CONVERSION METHOD TABLE
ENCODING METHOD DETERMINATION PART
24
MAIL EDITOR
26
23
BINARY/TEXT CONVERTER
T1
THIRD PARTY TABLE
ENCODING/ DECODING PART
21
IMAGE MEMORY
8
IMAGE CONVERTER
22
2
SCANNER
RECORDING PART
3

FIG. 3

THIRD PARTY TABLE T1

Quick Dial/ One-touch Key	Third Party Name	Internet e-mail address	Facsimile Number	Facsimile Classification
Quick Dial 001	ABC CORP.	abc@abc.or.jp	075-123-4567	G4
Quick Dial 002	Yamagami Shoten	yamagami@kyoto.or.jp	075-321-1111	G3
One-touch A	Matt Shokai	abc00123@Niftyserve.or.jp	06-789-2222	G3
One-touch B	Ichiba Corp.	inchiba@kyoto.or.jp	075-345-3333	G4

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FIG. 4

USER(SENDER)TABLE T2

User Name	User I.D.	Password	Internet e-mail address	Provider Classification
Jujo Ltd. Tanaka Ichiro	jujo tanaka	asdf lkj	jujo@kyoto.or.jp tanaka@kyoto.or.jp	A A

FIG. 5

PROVIDER TABLE T3

Telephone Number	Line Classification	Provider Name	Provider Classification
075-222-7771 06 -555-3333	Digital Analog	00 Net XX Net	A B

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FIG. 6(A)

BINARY/TEXT CONVERSION METHOD TABLE T4A

METHOD	CONVERTIBILITY(1:Yes,0:No)
7bit	1
base64	1
8bit	0
binary	1

FIG. 6(B)

IMAGE CONVERSION METHOD TABLE T4B

METHOD	CONVERTIBILITY(1:Yes,0:No)
TIFF (G3)	1

FIG. 7

TRANSFER DESTINATION TABLE T5

PRIORITY ORDER	TRANSFER DESTINATION NAME	DESTINATION ADDRESS	NETWORK CLASSIFICATION	NOTE
1	abc corp.	abc@abc.or.jp	inet	One-Touch Dial A
2	Yamagami Shoten	xyz@efg.co.jp	inet	

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FIG. 8

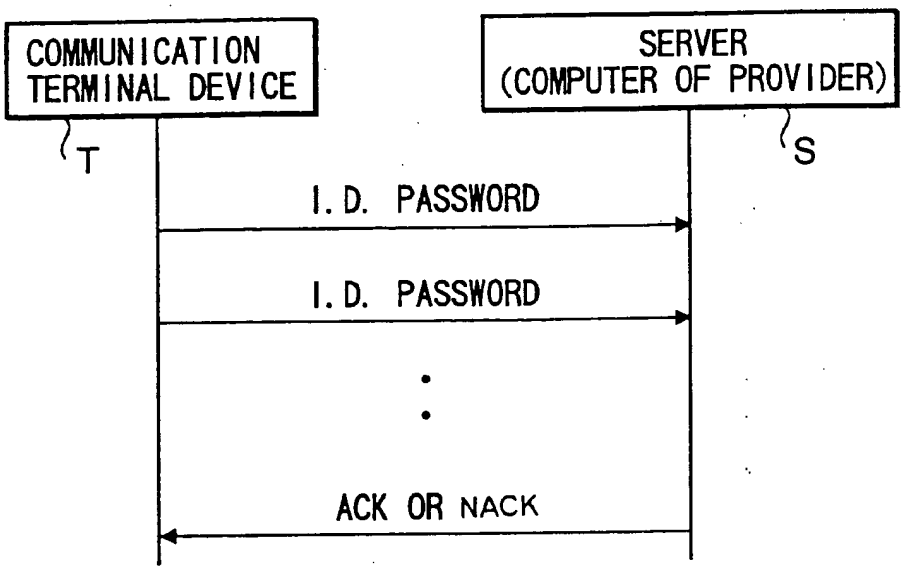

COMMUNICATION TERMINAL DEVICE
T
SERVER (COMPUTER OF PROVIDER)
S
I. D. PASSWORD
I. D. PASSWORD
ACK OR NACK

FIG. 9

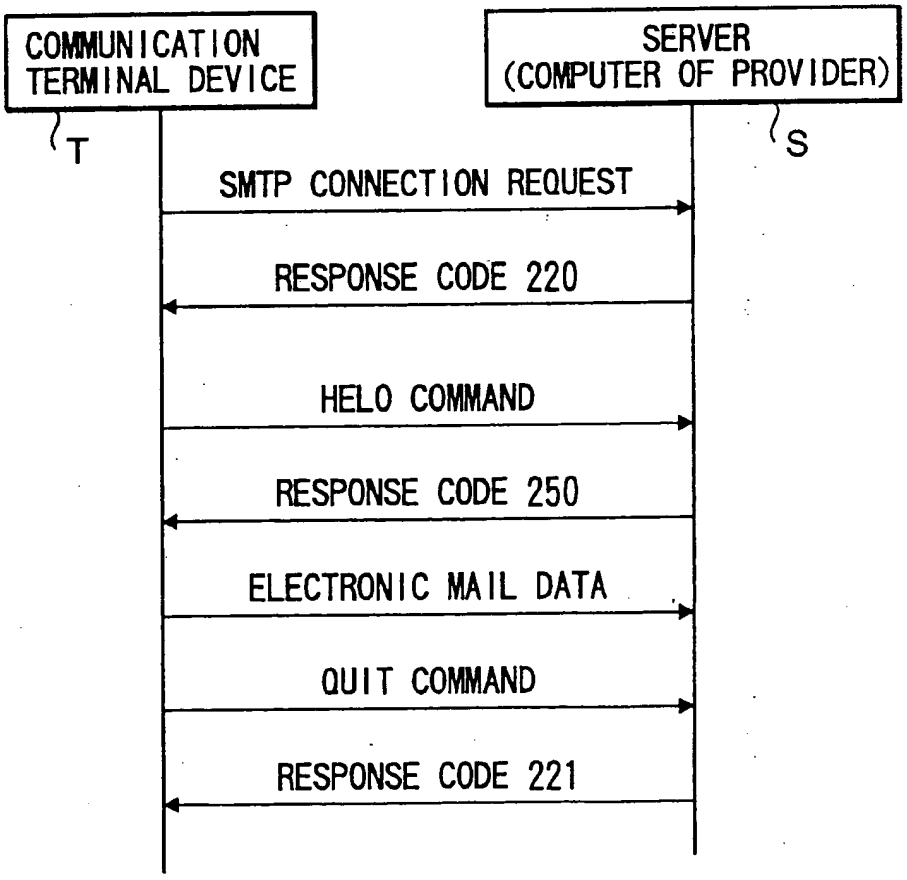

COMMUNICATION TERMINAL DEVICE
T
SERVER (COMPUTER OF PROVIDER)
S
SMTP CONNECTION REQUEST
RESPONSE CODE 220
HELO COMMAND
RESPONSE CODE 250
ELECTRONIC MAIL DATA
QUIT COMMAND
RESPONSE CODE 221

FIG. 10

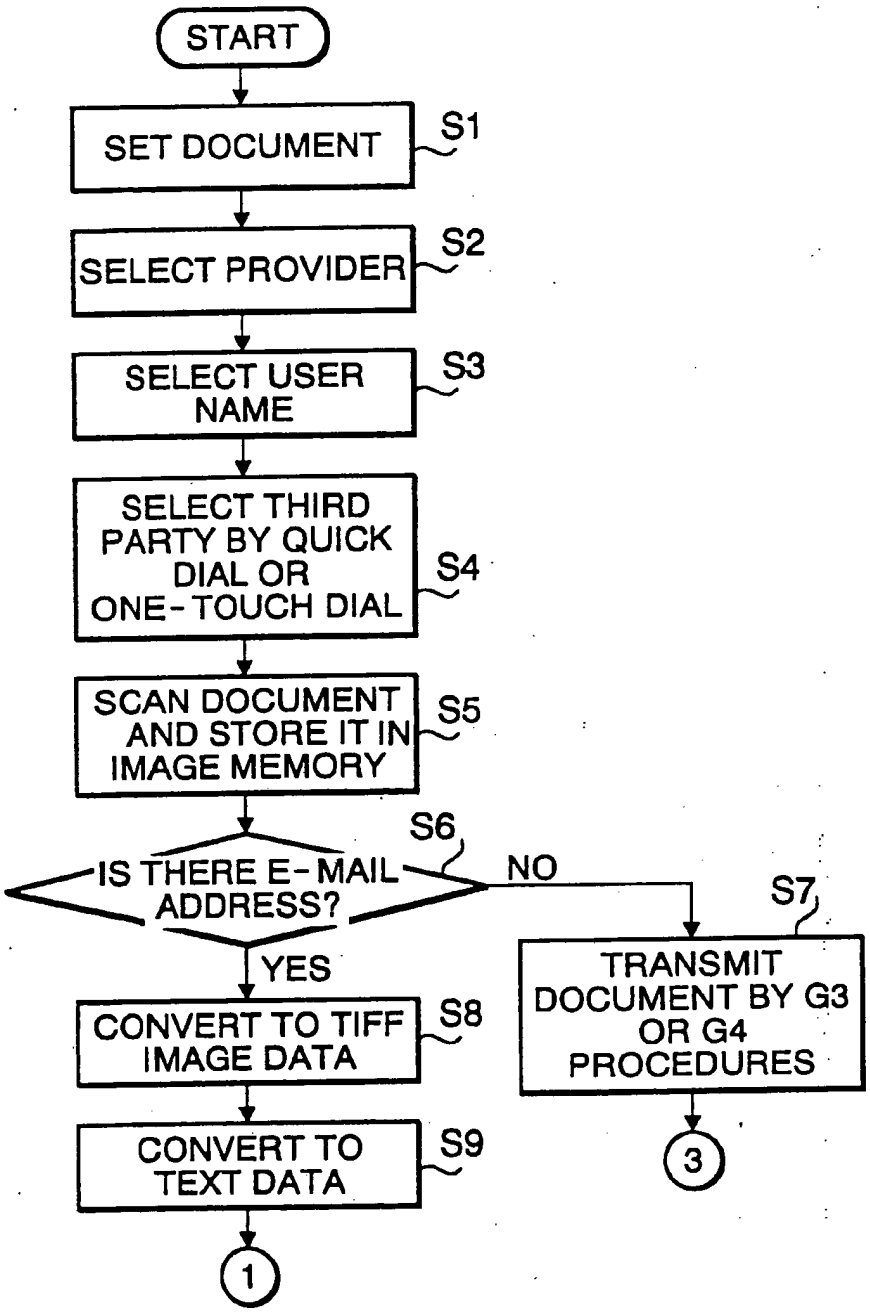

START
SET DOCUMENT
S1
SELECT PROVIDER
S2
SELECT USER NAME
S3
SELECT THIRD PARTY BY QUICK DIAL OR ONE-TOUCH DIAL
S4
SCAN DOCUMENT AND STORE IT IN IMAGE MEMORY
S5
IS THERE E-MAIL ADDRESS?
S6
NO
YES
TRANSMIT DOCUMENT BY G3 OR G4 PROCEDURES
S7
CONVERT TO TIFF IMAGE DATA
S8
CONVERT TO TEXT DATA
S9
3
1

FIG. 11

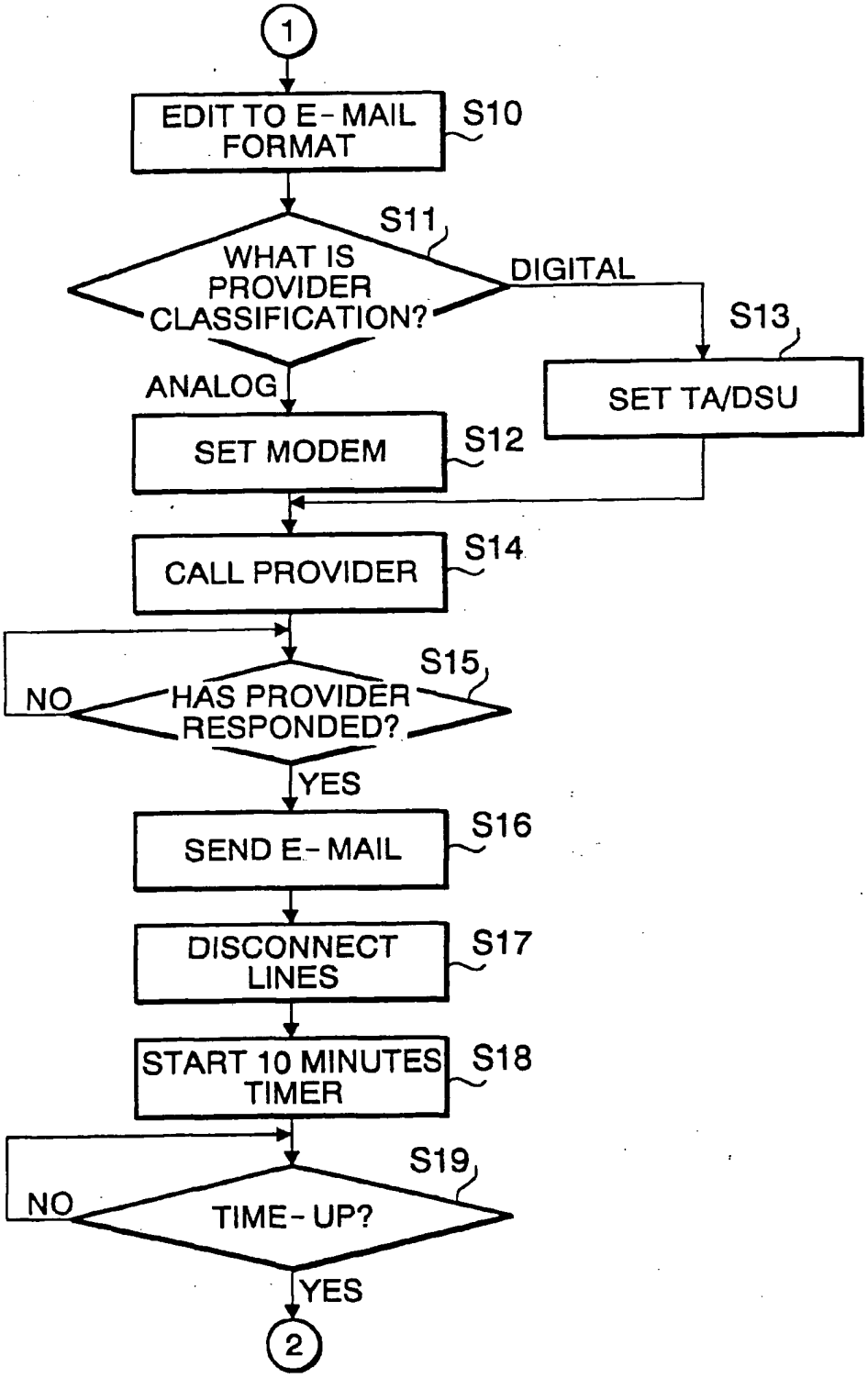

1
EDIT TO E-MAIL FORMAT
S10
S11
WHAT IS PROVIDER CLASSIFICATION?
DIGITAL
S13
SET TA/DSU
ANALOG
SET MODEM
S12
CALL PROVIDER
S14
S15
NO
HAS PROVIDER RESPONDED?
YES
SEND E-MAIL
S16
DISCONNECT LINES
S17
START 10 MINUTES TIMER
S18
S19
NO
TIME-UP?
YES
2

FIG. 12

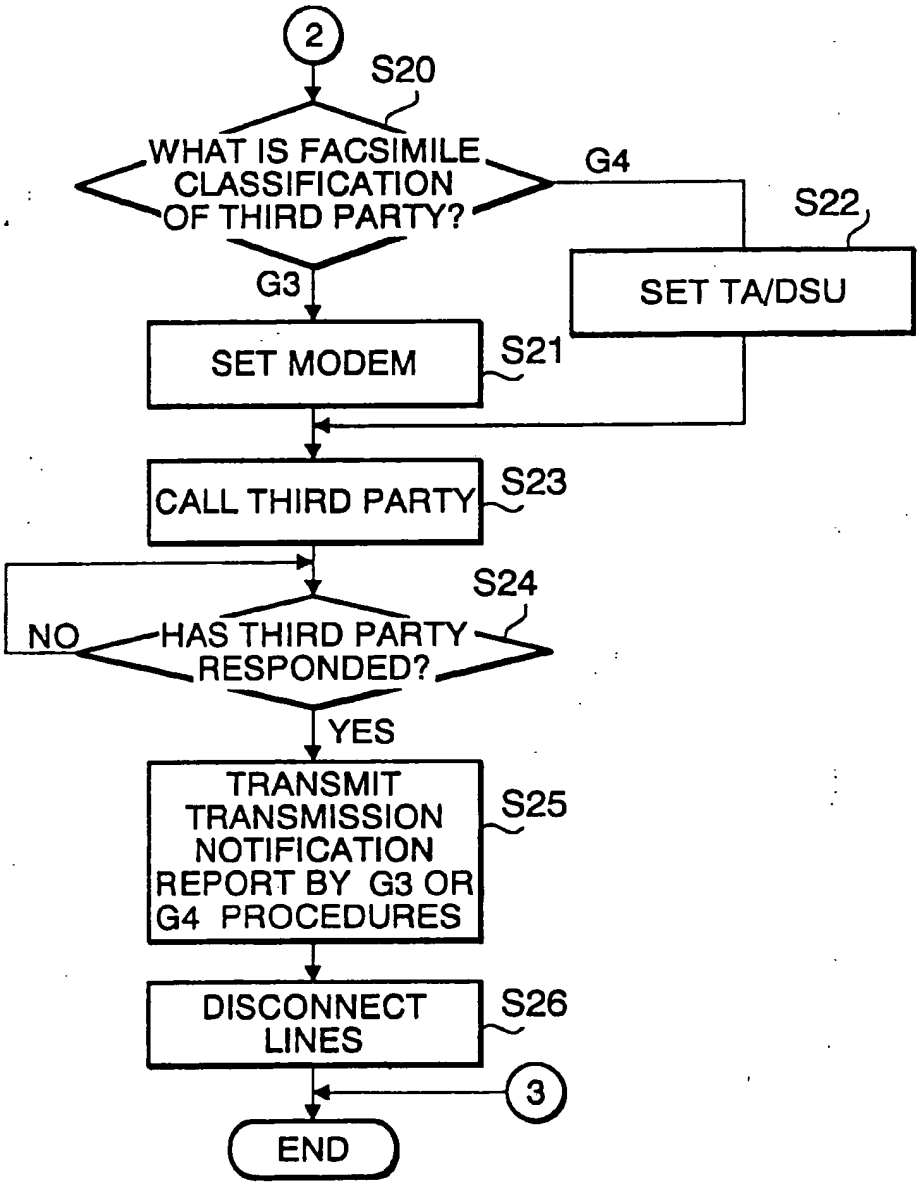

2
S20
WHAT IS FACSIMILE CLASSIFICATION OF THIRD PARTY?
G4
S22
SET TA/DSU
G3
SET MODEM
S21
CALL THIRD PARTY
S23
S24
NO
HAS THIRD PARTY RESPONDED?
YES
TRANSMIT TRANSMISSION NOTIFICATION REPORT BY G3 OR G4 PROCEDURES
S25
DISCONNECT LINES
S26
3
END

FIG. 13

```
Date: 31 May 1996 8:30:35 +900
From: Jujo@kyoto.or.jp
To: abc@abc.or.jp
Subject:TIFF(G3)
MIME-Version:1.0

Content-Transfer-Encoding:base64
```

FIG. 14

Transmission Notification Report

1996.05.31 AM 8:45
Jujo Ltd

To:ABC Corp.

This is to inform you that an e-mail message has been sent. Thank you for your cooperation in this matter.

Transmission time	:1996.05.31 AM 8:30
To	:abc@abc.or.jp
FROM	:jujo@kyoto.or.jp
Data type	:TIFF(G3)
No. of pages	:5
Data Volume	:560 kbytes

Sample of image data:

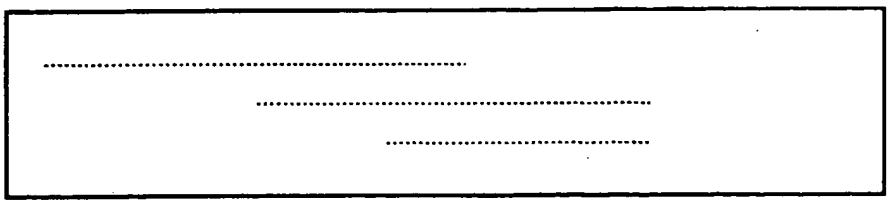
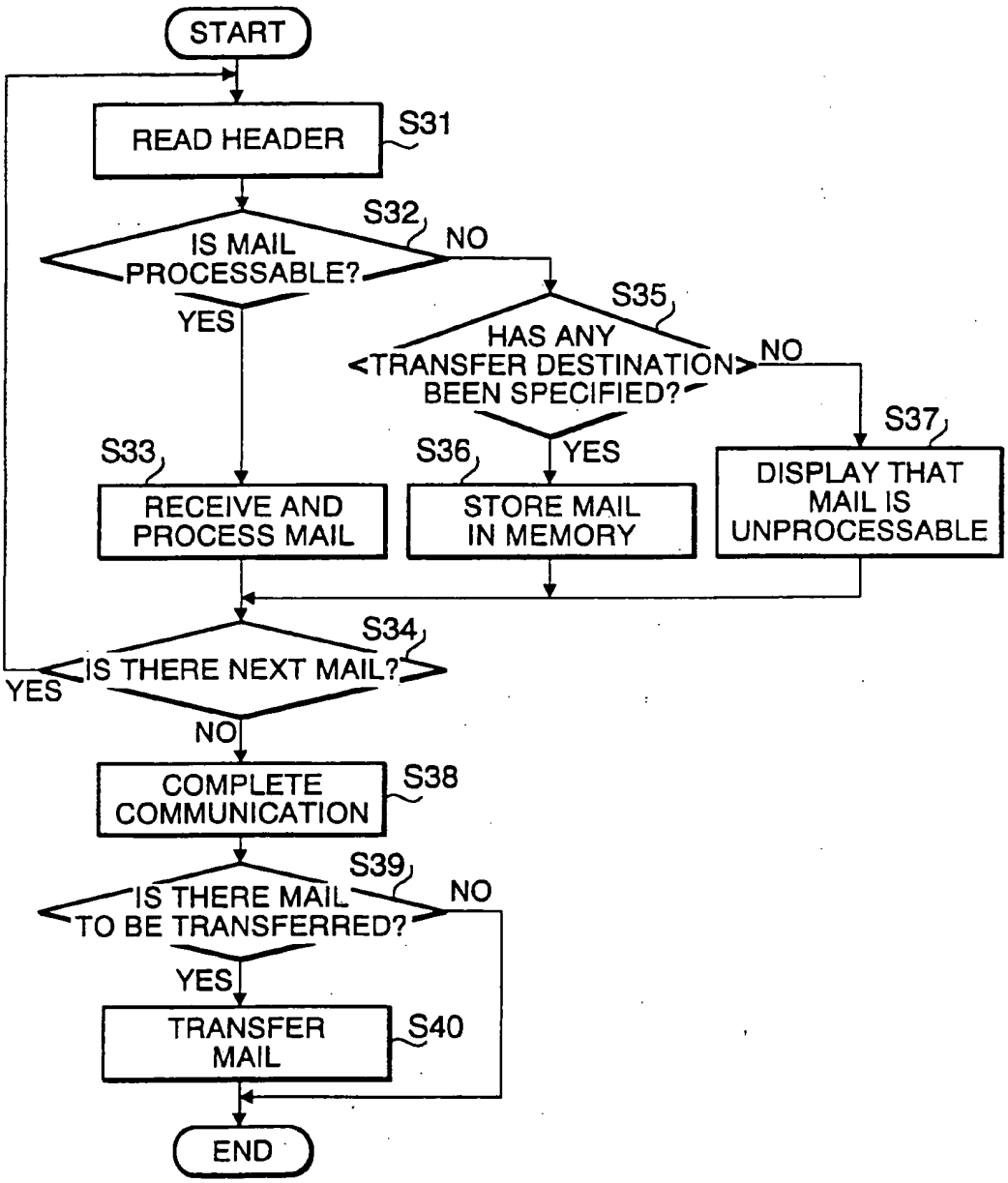


FIG. 15


START
READ HEADER
S31
S32
IS MAIL PROCESSABLE?
NO
YES
S35
HAS ANY <TRANSFER DESTINATION> BEEN SPECIFIED?
NO
YES
S33
S36
S37
RECEIVE AND PROCESS MAIL
STORE MAIL IN MEMORY
DISPLAY THAT MAIL IS UNPROCESSABLE
S34
IS THERE NEXT MAIL?
YES
NO
COMPLETE COMMUNICATION
S38
S39
IS THERE MAIL TO BE TRANSFERRED?
NO
YES
TRANSFER MAIL
S40
END

[Derwent Week] 1999-10 [Patent No.] JP10341306 A [Patentee] RICO/RICOH KK

[Title] Network facsimile control method involves verifying whether user is authorised person by verifying mail address of user stored in permission magnetic domain name table

[Primary Accession No.] 1999-117085 [Issue Date] 2002.03.05
[Priority]
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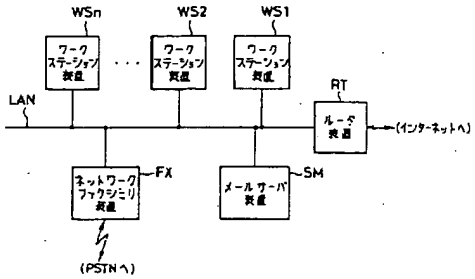
(Earliest) 1997.06.06 1997 JP163465
[IPC] H04L-012/28, H04L-012/46, H04N-001/00, H04N-001/21,
[Derwent Classification]
(EPI) W01, W02
[Manual Code]
(Electrical) W01-A06B5, W01-A06G3, W02-J03C7, W02-J03C8



[Abstract]
First Section: NOVELTY - The method involves verifying whether a user who receives the image data through a local area network is an authorised user by verifying the mail address of the user in a permission magnetic domain name table. When the user is detected to be an authorised user, the image data is transmitted to a facsimile (FX) of the designated public network.
USE : None given.
ADVANTAGE : An unauthorised usage by an incorrect user is prevented. DESCRIPTION OF DRAWING(S) - The block diagram shows a network system. (FX) Facsimile.

Reference No.4 (Japanese Laid-Open Patent publication Hei 10-341306)

The paragraph [0001]

" the present invention relates to a method for controlling a network facsimile apparatus which transmits and receives data on a local area network, transmits and receives facsimile data via a public telephone line based on a facsimile communication procedure. The network facsimile apparatus receives an e-mail via the local area network, stores image data included in the received e-mail, and, after that, transmits the image data to a facsimile apparatus, designated by the e-mail, via the public telephone line."

The paragraph [0037]

" And 'a user name' and a mail address of a transmitting user ('user1@***.co.jp') are set in a 'From' field of a header information of the e-mail. 'A telephone number of a transfer destination' indicating a telephone number of a facsimile apparatus, to which data is transferred, is set in a 'subject' field. 'A MUA application name' indicating an application name of MUA (Mail User Agent), which the transmitting user used, are set in a 'X-mailer' field."

The paragraph [0038]

" Transmitting image data is coded by a base 64 coding method, and then is set in a main context information."